**3GPP TSG- Meeting #**

**Berlin, Germany,** revision of S4aI230098

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  |  | **CR** | **0003** | **rev** | **3** | **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)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network |  | Core Network | **X** |

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| ***Title:*** | [EVEX] Data Reporting Configuration Inclusion of Data Sampliing Rules and Data Reporting Rules | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | , BBC | | | | | | | | | |
| ***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 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:*** | | The CR in S4-230650 (against TS 26.531) which specifies additional provisioning information that may be provided by the ASP to data collection clients via the Data Collection AF, with regards to data sampling rules and data reporting rules, was agreed at SA4#123-e. A corresponding CR to TS 26.532 is necessary to complete such provisioning information changes to EVEX technical specifications. This CR is submitted for such purpose. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | * Clauses 6.3.2.2: Addition of two properies to the DataReportingConfiguration resource: *dataSamplingRules* and *dataReportingRules*, along with clarification on similarity but uniqueness between the properties of the DataReportingRule type in clause 6.3 and the ReportingCondition type in clause 7.3 * New clause 6.3.3.3 on definition of the DataSamplingRule type. * New clause 6.3.3.4 on definition of the DataReportingRule type. * Correction to a cited cross reference in an entry of table 7.3.2.2-1. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Incorrect and incomplete specification. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 6.3.2.2, 6.3.3, 7.3.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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's revision history:*** | |  | | | | | | | | |

FIRST CHANGE

#### 6.3.2.2 DataReportingConfiguration resource type

Table 6.3.2.2-1: Definition of DataReportingConfiguration resource type

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Property name | Data type | Cardinality | Usage | Description |
| dataReportingConfigurationId | ResourceId | 1..1 | C: R  U: – | A unique identifier for this Data Reporting Configuration. |
| dataCollectionClientType | DataCollection‌Client‌Type | 1..1 | C: RW  U: – | The type of data collection client to which this Data Reporting Configuration pertains (see clause 5.4.3.1). |
| authorizationURL | Url | 0..1 | C: RW  U: RW | A URL that may be used to authorize the consumer entity prior to a data reporting subscription. |
| dataSamplingRules | array(Data  SamplingRule) | 0..1 | C: RW  U: RW | A set of definitions, each pertaining to the domain-specific parameters associated with the Event ID of the parent Data Reporting Provisioning Session, representing instructions on how UE data is to be sampled by the data collection client.  If omitted or empty, each parameter shall be sampled at its default frequency in all locations. |
| dataReportingRules | array(Data  ReportingRule) | 0..1 | C: RW  U: RW | A set of definitions, each pertaining to the domain-specific parameters associated with the Event ID of the parent Data Reporting Provisioning Session and logged by the data collection client, representing instructions on how collected UE data is to be reported by the data collection client to the Data Collection AF.  If omitted or empty, UE data shall be reported whenever the relevant reporting condition (see clause 7.3.2.2) is met, using a default reporting format and data packaging strategy for the data domain associated with the Event ID of the parent Data Reporting Provisioning Session. |
| dataAccessProfiles | array(Data‌Access‌Profile) | 1..1 | C: RW  U: RW | One or more Data Access Profile definitions, each describing a set of data processing instructions, applied by the Data Collection AF when exposing events. |

NEXT CHANGE

### 6.3.3 Simple data types and enumerations

#### 6.3.3.1 EventConsumerType enumeration

Table 6.3.3.1‑1: Definition of EventConsumerType enumeration

|  |  |
| --- | --- |
| Enumeration value | Description |
| NWDAF | The Network Data Analytics Function is the Event Consumer. |
| EVENT\_CONSUMER\_AF | The Event Consumer AF is the Event Consumer. |
| NEF | The Network Exposure Function is the Event Consumer. |

#### 6.3.3.2 DataAggregationFunctionType enumeration

Table 6.3.3.2-1 Definition of DataAggregationFunctionType enumeration

|  |  |
| --- | --- |
| Enumeration value | Description |
| NULL | No aggregation is applied: all values of the UE data parameter(s) are exposed to event consumers. |
| COUNT | The number of observed events over the indicated time period or the indicated set of users or the indicated set of locations is exposed to event consumers. |
| MEAN | The mean average of the values of the UE data parameter(s) over the indicated time period or the indicated set of users or the indicated set of locations is exposed to event consumers. |
| MAXIMUM | The maximum observed value of the UE data parameter(s) over the indicated time period or the indicated set of users or the indicated set of locations is exposed to event consumers. |
| MINIMUM | The minimum observed value of the UE data parameter(s) over the indicated time period or the indicated set of users or the indicated set of locations is exposed to event consumers. |
| SUM | The sum of the values of the UE data parameter(s) over the indicated time period or the indicated set of users or the indicated set of locations is exposed to event consumers. |

#### 6.3.3.3 DataSamplingRule type

Table 6.3.3.3-1 Definition of DataSamplingRule type

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Property name | Data type | Cardinality | Usage | Description |
| samplingFrequency | float | 0..1 | C: RW  U: RW | The value in sec-1 that specifies how often the UE data parameter(s) are to be measured and logged by the data collection client. |
| locationFilter | array(LocationArea5G) | 0..1 | C: RW  U: RW | Indication of the UE location(s) at which UE data parameter(s) are to be collected by the data collection client. |
| NOTE: A logical conjunction (i.e., Boolean AND) is meant when more than one property is present in the same information element – i.e., data is to be collected at the indicated sampling frequency when the UE is present at any of the indicated locations. | | | | |

#### 6.3.3.4 DataReportingRule type

Table 6.3.3.4-1 Definition of DataReportingRule type

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Property name | Data type | Cardinality | Usage | Description |
| reportingProbability | Percentage | 0..1 | C: RW  U: RW | The probability of reporting by the data collection client of the UE data parameter(s) it has logged.  If omitted, the default value of this parameter shall be 100 percent.  On each occasion the reporting condition (see clause 7.3.2.2) is met, the data collection client shall use a random number generator to produce an integer value between 0 and 100, and a report is sent to the Data Collection AF if the random value is less than or equal to this parameter. |
| reportingFormat | Uri | 1..1 | C: RW  U: RW | The format of reports to be sent by the data collection client to the Data Collection AF (e.g., encoding rules, ordering of parameters, delineation marking between parameters, etc.).  In the absence of a data reporting rule, a default reporting format for the data domain in question shall be assumed. |
| dataPackaging | string | 0..1 | C: RW  U: RW | Strategy for packaging UE data into reports sent to the Data Collection AF (e.g., maximum number of data records per report, maximum report size).  If absent, the data collection client should employ the default data packaging strategy specified by the indicated reporting format or, in the absence of such specificiation, any reasonable data packaging strategy. |
| NOTE: A logical conjunction (i.e., Boolean AND) is meant when more than one property is present in the same information element – i.e., data is to be reported with the indicated probability, according to the indicated reporting format and data packaging strategy. | | | | |

NEXT CHANGE

### 7.3.2 Structured data types

#### 7.3.2.1 DataReportingSession resource type

Table 7.3.2.1-1: Definition of DataReportingSession resource type

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Property name | Data type | Cardinality | Usage | Description |
| sessionId | string | 0..1 | C: — R: RO | Unique identifier for this Data Reporting Session assigned by the Data Collection AF. |
| validUntil | DateTime | 0..1 | C: — R: RO | The time when the information in this Data Reporting Session expires.  The data collection client, if still active, should request an up-to-date Data Reporting Session before this time. |
| externalApplicationId | ApplicationID | 1 | C: RW R: RO | The external application identifier, nominated by the data collection client, to which this Data Reporting Session pertains. |
| supportedDomains | array(DataDomain) | 1 | C: RW R: RO | Set of domains for which the data collection client declares that it is able to report UE data. (See clause 7.3.3.1).  An empty array indicates that no UE data can currently be reported. |
| samplingRules | map(DataDomain ->  array(Data‌Sampling‌Rule)) | 0..1 | C: — R: RO | A map specifying for each reporting domain listed a set of rules for sampling UE data (see clause 6.3.3.3).  The indices of the map shall be a subset of the reporting domains declared by the data collection client in supportedDomains.  If the array for a particular index in the map is empty, UE data collection shall be disabled for the indicated domain. |
| reportingConditions | map(DataDomain ->  array(Reporting‌Condition)) | 1..1 | C: — R: RO | A map specifying for each reporting domain listed the set of conditions (see clause 7.3.2.2) under which the data collection client reports UE data.  The indices of the map shall be a subset of the reporting domains declared by the data collection client in supportedDomains.  If the array for a particular index in the map is empty, UE data reporting shall be disabled for the indicated domain. |
| reportingRules | map(DataDomain ->  array(Data‌Reporting‌Rule) | 0..1 | C: — R: RO | A map specifying for each reporting domain listed a set of rules for reporting collected UE data (see clause 6.3.3.4).  The indices of the map shall be a subset of the reporting domains declared by the data collection client in supportedDomains.  If the array for a particular index in the map is empty, UE data reporting shall be disabled for the indicated domain. |

#### 7.3.2.2 ReportingCondition type

Table 7.3.2.2-1: Definition of ReportingCondition type

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Property name | Data type | P | Cardinality | Description |
| type | ReportingConditionType | M | 1 | Type of reporting condition (see clause 7.3.3.2). |
| period | DurationSec | C | 0..1 | The time period between UE data reports.  Only present when type is INTERVAL. |
| parameter | string | C | 0..1 | Identifies the parameter that triggers a UE data report when it crosses the value threshold.  Only present when type is THRESHOLD. |
| threshold | Double, Float, Int32, Int64, Uint16, Uint32, Uint64, or Uinteger | C | 0..1 | The value that parameter must cross to trigger a UE data report.  Only present when type is THRESHOLD. |
| reportWhenBelow | boolean | C | 0..1 | The direction in which the threshold must be crossed to trigger a UE data report.  If true, a report is triggered when the value of parameter drops below threshold.  If false, a report is triggered when the value of parameter exceeds threshold.  Only present when type is THRESHOLD. |
| eventTrigger | ReportingEventTrigger | C | 0..1 | The type of event that triggers a UE data report (see clause 7.2.3.3.3).  Only present when type is EVENT. |

END OF CHANGES