**3GPP TSG-SA4 Meeting #116e *S4-211377***

**Electronic meeting, Telco, November 10-19, 2021**

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| *CR-Form-v12.0* | | | | | | | | |
| **Pseudo CHANGE REQUEST** | | | | | | | | |
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|  | **26.532** | **CR** |  | **rev** |  | **Current version:** | **0.1.0** |  |
|  | | | | | | | | |
| *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:*** | Ndcaf\_DataReportingProvisioning Service Procedure | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Qualcomm Incorporated | | | | | | | | | |
| ***Source to TSG:*** | SA4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | EVEX | | | | |  | ***Date:*** | | | 2021-11-03 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-16 |
|  | *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-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Absence of text in TS 26.532 on data collection and reporting provisioning procedures conducted between the ASP and Data Collection AF over the R1 reference point. | | | | | | | | |
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| ***Summary of change:*** | | Proposed text for clause 4.2.3 of the spec. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Absence of necessary stage 3 text in TS 26.532 on data collection and reporting functionality. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 4.2.3 and its sub-clauses | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |
| ***56*** | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

------------- START OF CHANGE -----------

# 4 Procedures for Data Collection and Reporting

## 4.1 General

This clause specifies the stage 3 procedures for data collection and reporting.

## 4.2 Network-side procedures

### 4.2.1 General

This clause specifies the procedures used between network-side entities for UE data collection and reporting, along with related functionality pertaining to the provisioning, management, and delivery of such data between the Data Collection AF and consumer entities.

### 4.2.2 Data Collection AF registration with NRF

This clause specifies the use of the Nnrf\_NFManagement service API as defined in TS 29.510 [7] and invoked by a Data Collection AF instance to register its profile with the NRF in order to enable the discovery of the Data Collection AF by consumer entities.

### 4.2.3 Data collection and reporting provisioning

#### 4.2.3.1 General

An Application Service Provider, via its Provisioing AF. may use the procedures in this clause to supply data collection and reporting provisioning information, as defined in clause 4.2 of TS 26.531 [7], to the Data Collection AF via reference point R1 in the form of Data Reporting Configuration resources. A given Data Reporting Configuration comprises instructions and other information to be followed/used by those entities in their collection, processing and reporting of UE data, for the associated application service and event ID(s), to upstream client functions.

The provisioning process begins with the Provisioning AF using the procedures defined in clause 4.2.3.2 to create a Provisioning Session resource as an umbrella for subsequent Data Reporting Configuration resources.

The process then proceeds with the Provisioning AF using the procedures defined in clause 4.2.3.3 to provide the Data Collection AF with one or more Dtaa Reporting Configuration resources. Each set of provisioning information pertains to one application, identified by its External Application Identifier, and one type of exposed event, uniquely identified in the 5G System by its Event ID, as defined in clause  4.15.1 of TS 23.502 [3].

#### 4.2.3.2 Provisioning Session procedures

##### 4.2.3.2.1 General

Prior to provisioning of data collection and reporting , the Provisioning AF shall create a new Provisioning Session. The following CRUD operations are used to manage Provisioning Session resources. Additional details, including definition of the *Provisioning Sessions API,* are provided under clause 6.2.

##### 4.2.3.2.2 Create Provisioning Session

This procedure shall be used by the Provisioning AF to create a new Provisioning Session. The HTTP POST method shall be used for this purpose.

Upon successful creation, the Data Collection AF shall respond with a 201 (Created) response message that includes the resource identifier of the newly created Provisioning Session in the body of the reply and the URL of the resource, including its resource identifier, shall be returned as part of the HTTP Location header field.

##### 4.2.3.2.3 Retrieve Provisioning Session properties

This procedure is used by the Provisioning AF to obtain the properties of an existing Provisioning Session from the Data Collection AF. The HTTP GET method shall be used for this purpose.

##### 4.2.3.2.4 Update Provisioning Session properties

The Update operation is not allowed on Provisioning Session resources.

##### 4.2.3.2.5 Destroy Provisioning Session

This procedure is used by the Provisioning AF to destroy a Provisioning Session. The Data Collection AF shall use the HTTP DELETE method for this purpose.

As a side-effect of destroying a Provisioning Session, the Data Collection AF shall release any associated resources, purge any cached data, and delete all UE data reporting configurations associated with this Provisioning Session.

#### 4.2.3.3 Data Reporting Provisioning procedures

##### 4.2.3.3.1 General

Upon the successful creation of a Provisioning Session, the Provisioning AF shall use the procedures defined in this clause to configure UE data collection and reporting functionality specific to an application in the Data Collection AF. This clause defines the basic procedures. Additional details, including definition of the Data Reporting *Provisioning Sessions API* are provided under clause 6.3.

A given instance of a Data Reporting Configuration resource is identified by the dataReportingConfigurationType and dataReportingConfigurationId properties of the DataReportingConfiguration resource, The properties of that resource, as described in the following sub-clauses, pertain to UE data collection and reporting by different Data Collection Clients to the Data Collection AF

##### 4.2.3.3.2 Data Reporting Configuration types

The type of an instance of a Data Reporting Configuration resource is identified by the dataReportingConfigurationType property of the DataReportingConfiguration resource. The following types are defined in this specification:

* Type 1: data collection and reporting by a Direct Data Collection Client to the Data Collection AF,
* Type 2: data collection and reporting by a Direct Data Collection Client to the Data Collection AF, and
* Type 3: data collection and reporting by an AS to the Data Collection AF.

##### 4.2.3.3.3 Create Data Reporting Configuration

This procedure is used by the Provisioning AF to create a Data Reporting Configuration resource within the scope of a particular Provisioning Session. The HTTP POST method shall be used for this purpose and the request message body may include a DataReportingConfiguration resource, as specified under clause 6.3.

Upon success, the Data Collection AF shall respond with a 201 (Created) response message and the resource URL for the newly-created Data Reporting Configuration resource shall be returned in the Location header field.

If the procedure is unsuccessful, the Data Collection AF shall provide a response code as defined in clause 5.3.

This procedure may be performed multiple times to provision different Data Reporting Configurations in the scope of a particular Provisioning Session. Each such configuration resource is represented by a different value of the dataReportingConfigurationType or metricsReportingConfigurationId for the same data collection and reporting type.

##### 4.2.3.3.4 Retrieve Data Reporting Configuration

This procedure is used by the Provisioning AF to obtain the properties of an existing Data Reporting Configuration resource from the Data Collection AF. The HTTP GET method shall be used for this purpose.

If successful, the Data Collection AF shall respond with a 200 (OK) and the requested DataReportingConfiguration resource shall be returned in the body of the HTTP response message.

If the procedure is unsuccessful, the Data Collection AF shall provide a response code as defined in clause 5.3.

##### 4.2.3.3.5 Update Data Reporting Configuration

The update operation is invoked by the Provisioning AF to initially upload the representation of a Data Reporting Configuration resource created using the procedure in clause 4.2.3.3.3 or, in the case of an existing Data Reporting Configuration resource, to entirely replace or modify certain properties of that resource. All available properties may be updated. The HTTP PATCH or HTTP PUT methods shall be used for the update operation.

If the procedure is successful, the Data Collection AF shall respond with a 200 (OK) reflecting the successful update operation.

If the procedure is unsuccessful, the Data Collection AF shall provide a response code as defined in clause 5.3.

##### 4.2.3.3.6 Destroy Data Reporting Configuration

This operation is used by the Provisioning AF to destroy a Data Reporting Configuration resource and to terminate the related UE data reporting procedure. The HTTP DELETE method shall be used for this purpose.

As a result, the Data Collection AF should release any associated resources, deliver any pending data data to subscribed recipients, as appropriate to the Event ID in question, and delete any corresponding configurations.

If the procedure is successful, the Data Collection AF shall respond with a 200 (OK) response message.

If the procedure is unsuccessful, the Data Collection AF shall provide a response code as defined in clause 5.3.

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