**3GPP TSG- Meeting #**

**, , -**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  |  | **CR** |  | **rev** |  | **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 | **X** | Radio Access Network |  | Core Network | **X** |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** |  | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** |  | | | | | | | | | |
| ***Source to TSG:*** | S4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** |  | | | | |  | ***Date:*** | | |  |
|  |  | | | |  | |  | | |  |
| ***Category:*** |  |  | | | | | ***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:*** | | Fulfill objective 12 of the WID. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Add data reporting for ANBR-based network assistance. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | An objective of the work item is not fulfilled. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 4.11A (new), 17A (new), C.5.2 (new) | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **X** |  | Other core specifications | | | | TS 26.532 CR 0004 | | |
| ***affected:*** | |  |  | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  |  | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | Rev -: Initial version for MBS ad hocs on 27th July and 10th August. The data report type and OpenAPI definitions are incomplete.  Rev 1: Revision for SA4 #125. | | | | | | | | |

## 4.11A Data collection and reporting procedures at reference point R2

### 4.11A.1 General

These procedures are used by the Direct Data Collection Client instantiated in the Media Session Handler to acquire its data collection and reporting client configuration from, and subsequently report media streaming access activity to, the Data Collection AF instantiated in the 5GMS AF. It does so by invoking the *Ndcaf\_DataReporting* service offered by the Data Collection AF at reference point R2, as specified in clause 7 of TS 26.532 [49].

### 4.11A.2 Data collection and reporting client configuration

The Direct Data Collection Client instantiated in the Media Session Handler shall use the service operations and procedures specified in TS 26.532 [49] to obtain its data collection and reporting client configuration from the Data Collection AF instantiated in the 5GMS AF at reference point R2 by invoking appropriate Ndcaf\_DataReporting service operations as specified in clause 7.2 of [49] according to the procedures specified in clauses 4.3.2 of [49].

The Direct Data Collection Client instantiated in the Media Session Handler shall declare that it supports the MS\_ANBR\_NETWORK\_ASSISTANCE data reporting domain in Data‌Reporting‌Session.‌supportedDomains (see clauses 7.3.2.1 and 7.3.3.1 of TS 26.532 [49]) and the Data Collection AF instantiated in the 5GMS AF shall request reporting for this domain by including the same value as a key to the Data‌Reporting‌Session.‌reportingConditions dictionary. The value of the ReportingCondition.type property at this key shall be EVENT or OFF.

The Direct Data Collection Client instantiated in the Media Session Handler shall refresh its data collection and reporting client configuration according to the procedures specified in clause 4.3.2.3 of TS 26.532 [49].

### 4.11A.3 ANBR-based Network Assistance invocation reporting

The Direct Data Collection Client instantiated in the Media Session Handler shall use the service operations and procedures specified in TS 26.532 [49] to report ANBR-based Network Assistance invocations to the Data Collection AF instantiated in the 5GMS AF at reference point R2 by invoking appropriate Ndcaf\_DataReporting service operations as specified in clause 7.3 of [49] according to the procedures specified in clauses 4.3.3 of [49].

The conditions for sending an ANBR-based Network Assistance invocation report by the Direct Data Collection Client instantiated in the Media Session Handler and the parameters of such report are signalled in the data collection and reporting client configuration obtained using the procedure specified in clause 4.11A.2.

In order to submit an ANBR-based Network Assistance invocation report, the Direct Data Collection Client instantiated in the Media Session Handler shall send an HTTP POST message to the Data Collection AF instantiated in the 5GMS AF. The request body shall be a JSON document of type DataReport (as defined in clause 7.3 of TS 26.532 [49]) containing one or more ANBRNetworkAssistanceInvocationRecord structures, as specified in clauses 17A.2 and C.5.2 of the present document.

The Data Collection AF shall respond with a 200 (OK) message to acknowledge successful processing of the ANBR-based Network Assistance invocation report.

# 17A Data reporting at R2

## 17A.1 General

The following record types shall be used with the Ndcaf\_DataReporting\_Report service operation specified in clause 7.2.3.4.1 of TS 26.532 [47]. In each case, one or more records are included in a DataReport, as specified in clause 7.3.2.3 of [47].

The OpenAPI definitions of the record types are found in clause C.5.2 of the present document.

## 17A.2 ANBRNetworkAssistanceInvocationRecord type

As specified in clause 4.11A.3, the ANBRNetworkAssistanceInvocationRecord type shall be used by the Direct Data Collection Client instantiated in the Media Session Handler to report ANBR-based Network Assistance invocations at reference point R2.

The ANBRNetworkAssistanceInvocationRecord type structure is specified in table 17A.2-1 below.

Table 17A.2-1: Definition of ANBRNetworkAssistanceInvocationRecord type

| Property name | | Data Type | Cardinality | Description |
| --- | --- | --- | --- | --- |
| timestamp | | DateTime | 1..1 | The date and time of the media access. (See table 6.4.2-1.) |
| sessionId | | Media‌Streaming‌Session‌Id | 1..1 | An identifier for the HTTP session on which the Media Stream Handler request was made (see clause 6.4.3.10).  This should not contain any user-identifiable data. It may, for example, be a one-way hash of the transport connection identifier, if available from the underlying transport protocol. Alternatively, it could be a one-way hash of the 5-tuple formed from the Media Stream Handler and 5GMSd AS endpoint addresses and a transport protocol identifier, combined with a randomly chosen salt to prevent reverse engineering of the original values. |
| network‌Assistance‌Type | | Network‌Assistance‌Type | 1..1 | The type of Network Assistance solicited by the Media Session Handler (see table 18.5.2‑2).  Only the following values shall be used in this context:  - ANBR\_THROUGHPUT\_ESTIMATION  - ANBR\_DELIVERY\_BOOST |
| policy‌Template‌Id | | ResourceId | 0..1 | Identifying the Policy Template (if any) referenced by the Media Session Handler in the parent Network Assistance Session. |
| service‌Data‌Flow‌Descriptions | | array(‌Service‌Data‌Flow‌Description) | 0..1 | If present, a set of one or more Service Data Flow Descriptions (see clause 6.4.3.1) to which the Network Assistance session has been applied. |
| requested‌QoS | | Unidirectional‌QoS‌Specification | 0..1 | The network QoS parameters (if any) requested by the Media Session Handler from the RAN (see clause 18.2.3). |
| recommended‌QoS | | object | 0..1 | The network QoS parameters (if any) recommended to the Media Session Handler by the RAN. |
|  | maximum‌BitRate | BitRate | 1..1 | The maximum bit rate recommended by the RAN. |
|  | minimum‌BitRate | BitRate | 1..1 | The minimum bit rate recommended by the RAN. |

## C.5.2 R2 data reporting records

For the purpose of referencing entities defined in this clause, it shall be assumed that the OpenAPI definitions below are contained in a physical file named "TS26512\_R2\_DataReporting.yaml".

|  |
| --- |
| openapi: 3.0.0  info:  title: 5GMS Data Reporting data types  version: 1.0.0  description: |  5GMS Data Reporting data types  © 2023, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).  All rights reserved.  tags:  - name: 5GMS Data Reporting data types  description: '5G Media Streaming: Data Reporting data types'  externalDocs:  description: 'TS 26.512 V18.0.0; 5G Media Streaming (5GMS); Protocols'  url: 'https://www.3gpp.org/ftp/Specs/archive/26\_series/26.512/'  paths: {}  components:  schemas:  ANBRNetworkAssistanceInvocationRecord:  description: "An R2 data reporting record describing a single ANBR-based Network Assistance invocation by the Media Stream Handler."  allOf:  - $ref: 'TS26532\_Ndcaf\_DataReporting.yaml#/components/schemas/BaseRecord'  - $ref: 'TS26512\_CommonData.yaml#/components/schemas/MediaStreamingSessionIdentification'  - $ref: 'TS26512\_CommonData.yaml#/components/schemas/NetworkAssistanceInvocation' |