**3GPP TSG SA WG5 Meeting 137-e *TDoc S5-213054***

electronic meeting, online, 10-19 May 2021

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| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
|  |
|  | **32.423** | **CR** | 0123 | **rev** | **1** | **Current version:** | 17.1.1 |  |
|  |
| *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 |  | Radio Access Network | **X** | Core Network | **X** |

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|  |
| ***Title:***  | Add abnormal case for trace recording session stop in GPB trace record format |
|  |  |
| ***Source to WG:*** | Ericsson |
| ***Source to TSG:*** | S5 |
|  |  |
| ***Work item code:*** | e\_5GMDT |  | ***Date:*** | 2021-05-10 |
|  |  |  |  |  |
| ***Category:*** | C |  | ***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 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-15 (Release 15)Rel-16 (Release 16)* *Rel-17 (Release 17)Rel-18 (Release 18)* |
|  |  |
| ***Reason for change:*** | Add abnormal case for trace recording session stop so that reason for session stop can be specified |
|  |  |
| ***Summary of change:*** | * Add possible reason for trace recording session stop
* GPB trace record schema updated acoordingly
* Some minor correction
 |
|  |  |
| ***Consequences if not approved:*** |  |
|  |  |
| ***Clauses affected:*** | 5.2.4.1, 5.2.4.3a, 5.2.4.3b, G.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***

#### 5.2.4.1 Introduction

The following administrative messages are defined for trace management purposes:

- Trace Session Start

- Trace Session Stop

- Trace Recording Session Start

- Trace Recording Session Stop

- Trace Stream Heartbeat (streaming only)

- Trace Recording Session Not Started

- Trace Recording Session Dropped Events

- Trace File Open (file based only)

- Trace File Close (file based only)

- Trace File Abnormal Closed (file based only)

***Next change***

#### 5.2.4.3a Trace Recording Session Start administrative message

The Trace Recording Session Start administrative message shall be used to convey the start of a Trace Recording Session (see 3GPP TS 32.422 [3] for details). The Trace Record in this case may have zero-size payload. The value of the traceRecordTypeId field in the Streaming Trace Record Header is set to "TRACE\_ RECORDING\_SESSION\_START".

#### 5.2.4.3b Trace Recording Session Stop administrative message

The Trace Recording Session Stop administrative message shall be used to convey the stop of a Trace Recording Session (see 3GPP TS 32.422 [3] for details). The Trace Record in this case may have zero-size payload in the normal case, For the abnormal case, the trace record should include the reason for the session stop. One of the reasons could be overloaded. The value of the traceRecordTypeId field in the Streaming Trace Record Header is set to "TRACE\_ RECORDING\_SESSION\_STOP".

***Next change***

# G.2 Trace Record Protocol Buffer (GPB) definitions

Normative GPB Trace Record schema, defined per clause 5.2:

syntax = “proto3”;

/\* Trace Record per 3GPP 32.423 specification.

 \* v16

 \*/

enum TraceRecordType {

    NORMAL = 0;

    TRACE\_SESSION\_START = 1;

    TRACE\_SESSION\_STOP = 2;

    TRACE\_RECORDING\_SESSION\_START = 3;

    TRACE\_RECORDING\_SESSION\_STOP = 4;

    TRACE\_STREAM\_HEARTBEAT = 5;

    TRACE\_RECORDING\_SESSION\_DROPPED\_EVENTS = 6;

    TRACE\_RECORDING\_SESSION\_NOT\_STARTED = 7;

 TRACE\_FILE\_OPEN = 8;

    TRACE\_FILE\_CLOSE = 9;

    TRACE\_FILE\_ABNORMAL\_CLOSED= 10;

}

message GlobalGnbId {

    bytes plmn\_identity = 1;

    int64 gnb\_id = 2;

}

message TraceRecordHeader {

 int64 time\_stamp = 1;

 string nf\_instance\_id = 2;

 string nf\_type = 3;

 bytes trace\_reference = 4;

 bytes trace\_recording\_session\_ref = 5;

 TraceRecordType trace\_rec\_type\_id = 6;

 bytes ran\_ue\_id = 7;

 string payload\_schema\_uri = 8;

  GlobalGnbId global\_gnb\_id = 9;

 map<string, string> vendor\_extension = 10;

}

message TraceSessionStart {

  map<string, string> vendor\_extension = 1;

}

message TraceSessionStop {

  map<string, string> vendor\_extension = 1;

}

message TraceRecordingSessionStart {

map<string, string> vendor\_extension = 1;

}

message TraceRecordingSessionStop {

 string reason = 2;

  map<string, string> vendor\_extension = 1;

}

message TraceStreamHeartbeat {

  map<string, string> vendor\_extension = 1;

}

message TraceRecordingSessionDroppedEvents {

  int64 number\_of\_dropped\_events = 1;

  map<string, string> vendor\_extension = 2;

}

message TraceRecordingSessionNotStarted {

 string reason = 1;

  map<string, string> vendor\_extension = 2;

}

message TraceFileOpen {

map<string, string> vendor\_extension = 1;

}

message TraceFileClose {

map<string, string> vendor\_extension = 1;

}

message TraceFileAbnormalClosed {

 string reason = 1;

  map<string, string> vendor\_extension = 2;

}

message CommonTracePayload {

  oneof record\_payload {

    TraceSessionStart trace\_session\_start = 1;

    TraceSessionStop trace\_session\_stop = 2;

    TraceRecordingSessionStart trace\_recording\_session\_start = 3;

    TraceRecordingSessionStop trace\_recording\_session\_stop = 4;

    TraceStreamHeartbeat trace\_stream\_heartbeat = 5;

    TraceRecordingSessionDroppedEvents trace\_recording\_session\_dropped\_events = 6;

    TraceRecordingSessionNotStarted trace\_recording\_session\_not\_started = 7;

  TraceFileOpen trace\_file\_open = 8;

    TraceFileClose trace\_file\_close = 9;

    TraceFileAbnormalClosed trace\_file\_abnormal\_closed = 10;

 }

}

message TraceRecord {

 TraceRecordHeader header = 1;

 bytespayload = 2;

}

***End of changes***