**3GPP TSG SA WG5 Meeting 135-e *TDoc S5-211082***

electronic meeting, online, 25 January - 3 February 2021

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| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
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|  | **32.421** | **CR** | 0097 | **rev** | **1** | **Current version:** | 17.0.0 |  |
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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 |  | Radio Access Network | **X** | Core Network | **X** |

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|  |
| ***Title:***  | Add new requirement for GPB trace format aligning with TS 32.423 |
|  |  |
| ***Source to WG:*** | Ericsson |
| ***Source to TSG:*** | S5 |
|  |  |
| ***Work item code:*** | e\_5GMDT |  | ***Date:*** | 2021-01-25 |
|  |  |  |  |  |
| ***Category:*** | B |  | ***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)* |
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| ***Reason for change:*** | Add new requirement for GPB trace reporting format aligning with TS 32.423 |
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| ***Summary of change:*** | * Add requirements for GPB trace format
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| ***Consequences if not approved:*** | The requirement would be missing |
|  |  |
| ***Clauses affected:*** | 5.5 |
|  |  |
|  | **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***

## 5.5 Requirements for Trace Data reporting

The high level requirements for Trace Data reporting, common to both Management activation/deactivation and Signalling Based Activation/Deactivation, are as follows (Trace record contents, file formats and file transfer mechanisms are defined in 3GPP TS 32.423 [3]):

- Trace records should be generated in each NE where a Trace Session has been activated and a Trace Recording Session has been started.

- Format of the Trace records shall be XML or GPB based on the Schema in TS 32.423 [3].

- In UMTS or EPS trace, the trace records should be transferred on the Itf-N to the Network Manager using one of two approaches: direct transfer from NE to NM or transfer from NE to NM via EM.

- Trace records may also be transferred to an external IP address (received in Trace Control and Configuration Parameters) in 3 ways:

1) Direct transfer from NE to IP address

2) Transfer from NE to IP address via management system

3) Transfer from NE to management system. The management system notifies the holder of the IP address that collects the files.

- The Trace Records in a shared node for a Participating Operator’s trace request should be collected by the Master Operator’s NE and may be delivered through the Master Operator's management system. The Trace records shall be made available to the Participating Operator’s management system.

The high-level requirements for stopping a Trace Recording Session, specific for Service Level Tracing for IMS are as follows:

The following high-level OMA Service Level Tracing requirements apply [9].

[SLT-HL-4] with the following clarification:

- Encoded trace information shall be Standard File Format. Standard File Format may not be applicable for encoded trace information at the UE.

[SLT-HL-7] with the following clarification:

- An instance of a service level trace across a PLMN shall be uniquely identifiable using the Trace Recording Session Reference.

[SLT-HL-8]

[SLT-COM-1] with the following clarification:

- Time stamping alone to determine the sequence of IMS NEs performing trace within the *service chain* shall not be used;

- Statistical information shall not be included as part of IMS NE characteristics;

- Service Level Tracing shall apply only to the IMS session layer and not the underlying transport layers.

[SLT-COM-4] with the following clarification:

- An IMS NE, in addition to providing trace information specific to a service that it has traced, may also make available other information, for example, timestamp and throughput information.

[SLT-NI-1] with the following clarification:

- The UE shall expose a standardised interface for Trace Parameter Configuration and the retrieval of trace information. This interface may not be standardized by 3GPP.

[SLT-NI-2] with the following clarification:

- An IMS NE shall transfer Trace records in Standard File Formats.

The high-level requirements for Trace Data reporting in case of file-based trace reporting are as follows:

- For transfer of Trace records FTP or secure FTP shall be used.

Editor's note: The transfer of Trace record from the UE is For Further Study.

The high-level requirements for Trace Data reporting in case of streaming trace reporting are as follows:

- The same connection between data producer and data consumer may be used for the reporting of Trace data under all Trace Recording Sessions of the same Trace Session reported by the same data producer.

- A connection from the data producer to the consumer shall be established and information about Trace Session shall be provided to the data consumer.

- Binary encoding shall be used for the transfer of all Trace data from data producer to the data consumer.

- The periodicity and amount of data in each data burst from data producer to data consumer shall maintain the data relevance while minimizing the amount of transport overhead.

- The data producer shall re-establish connection to the data consumer and provide the information about Trace Session upon unexpected connection termination (e.g. in cases such as re-start of data producer).

- It shall be possible to specify format of trace records based on GPB Schema in TS 32.423 [3].

***End of changes***