**3GPP TSG SA WG4 #112e *S4-21xxxx***

**E-meeting, 1st – 10th February 2021**

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| *CR-Form-v12.0* | | | | | | | | |
| **Pseudo CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **26.8xx** | **CR** | **<CR#>** | **rev** | **-** | **Current version:** | **0.0.0** |  |
|  | | | | | | | | |
| *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:*** | [FS\_5GMS-EXT] Key Topic Network Event usage | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Qualcomm Incorporated | | | | | | | | | |
| ***Source to TSG:*** | SA4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | FS\_5GMS-EXT | | | | |  | ***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 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:*** | | The study item description identifes the key topic “Network Event usage”. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Adds the structure and description for this key topic | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Key topic not addressed | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |

**===== CHANGE =====**

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non‑specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] 3GPP TS 26.501: " 5G Media Streaming (5GMS); General description and architecture".

[3] 3GPP TS 26.511: "5G Media Streaming (5GMS); Profiles, codecs and formats".

[4] 3GPP TS 26.512: "5G Media Streaming (5GMS); Protocols".

**===== CHANGE =====**

# 4 Introduction to 5G Media Streaming

## 4.1 Introduction

## 4.2 Collaboration Scenarios

## 4.3 Architectures

## 4.4 Summary of Stage-3 enablers

**===== CHANGE =====**

# 5 Key Topics

## 5.1 Introduction

## 5.8 Network Event usage

### 5.8.1 Description

The 5GMS AF performs several critical support operations for media streaming sessions. It also is responsible for collecting information about the progress and status of media streaming sessions. This information may be of interest to the AP or to other NFs in the network.

Thee 5G architecture defines exposure mechanisms by the AF to other NFs in the network. [TS 23.501] and [TS 23.502] define the stage 2 Exposure service that can be offered by the AF. In [TS 29.517], the stage 3 realization of the Exposure service is specified as a RESTful API.

The resource structure is replicated in the following figure for convenience:



An NF consumer subscribes to an application event and provides a URL on which it desires to receive the related notifications. Both periodic reporting and immediate reporting options are available. The ReportingInformation as defined in [TS 29.3] structure is used to indicate the desired type of reporting for the selected event set.

So far, the following AfEvents are defined:

|  |  |  |
| --- | --- | --- |
| Enumeration value | Description | Applicability |
| SVC\_EXPERIENCE | Indicates that the event subscribed is service experience data for an application. | ServiceExperience |
| UE\_MOBILITY | Indicates that the event subscribed is UE mobility information. | UeMobility |
| UE\_COMM | Indicates that the event subscribed is UE communication information. | UeCommunication |
| EXCEPTIONS | Indicates that the event subscribed is exceptions information. | Exceptions |

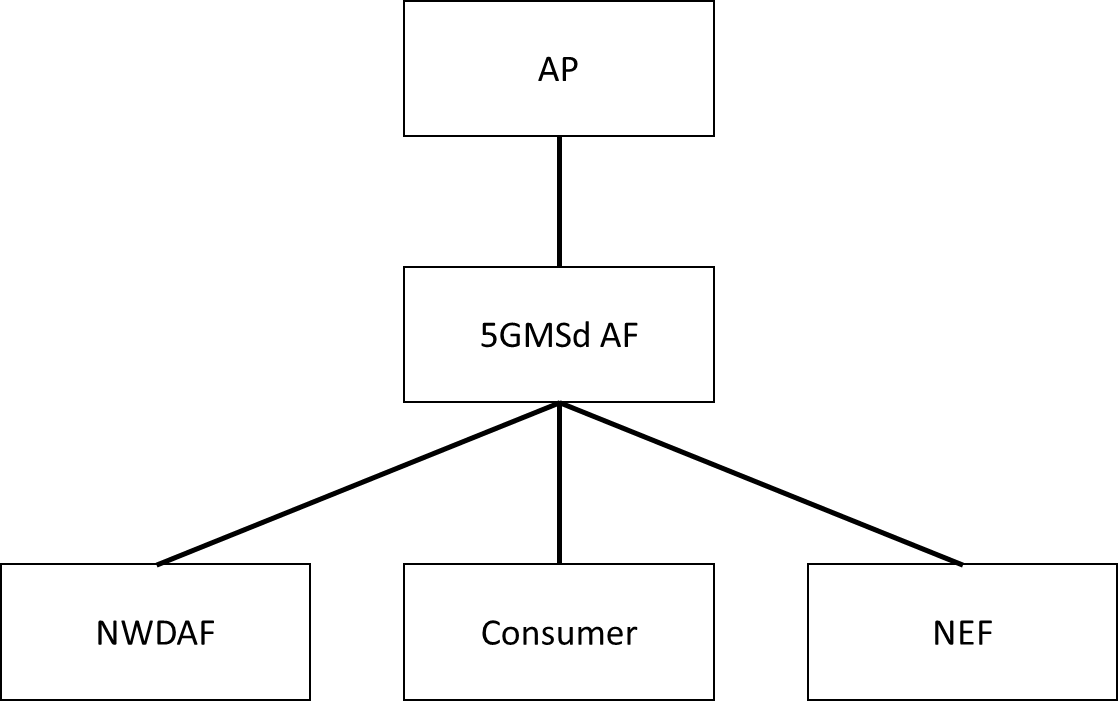
Additional AFEvents may be defined.

### 5.8.2 Collaboration Scenarios

The Application Provider (AP) is outsourcing part of its content hosting to the MNO. The AP makes use of the Provisioning APIs to configure its content distribution. The AP would like to track the usage of the network resources for the distribution of its content as well as the QoE for its mobile consumers. At the same time, it wants to limit access to this information to protect their service secrets and user’s privacy. The AP configures data collection from UEs and the 5GMSd AS(s) to determine which data is collected and who can access it at what level. The 5GMSd AF triggers the data collection accordingly and uses the AF Event Exposure framework to notify consumers about collected data and events.

### 5.8.3 Deployment Architectures

The deployment architecture for the data collection and exposure by the 5GMSd AF is depicted by the following figure:



### 5.8.4 Mapping to 5G Media Streaming and High-Level Call Flows

The following is a sample call flow of the operation of the data collection and exposure:



### 5.8.5 Potential open issues

The following events are expected to be defined:

* Consumption reporting.
* Quality of Experience reporting.
* Network Assistance.
* QoS and Charging usage.
* CDN access logs

For each of these events, the triggers for the data collection and the levels of access to the collected data need to be defined as well.

### 5.8.6 Candidate Solutions

Editor’s Note: Provide candidate solutions (including call flows) for each of the identified issues.