**3GPP TSG-SA5 Meeting #146bis-e *S5-231083rev1***

e-meeting, 16 -19 January 2023

**Source: China Mobile**

**Title: New WID on Management Aspect of 5GLAN**

**Document for: Approval**

**Agenda Item: 6.2.2**

3GPP™ Work Item Description

Information on Work Items can be found at <http://www.3gpp.org/Work-Items>
See also the [3GPP Working Procedures](http://www.3gpp.org/specifications-groups/working-procedures), article 39 and the TSG Working Methods in [3GPP TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm)

Title: Management Aspect of 5GLAN

## Acronym: 5GLAN\_Mgt

## Unique identifier:

## Potential target Release: {Rel-18}

# 1 Impacts

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Affects: | UICC apps | ME | AN | CN | Others (specify) |
| Yes |  |  |  | X |  |
| No |  |  |  |  |  |
| Don't know |  |  |  |  |  |

# 2 Classification of the Work Item and linked work items

## 2.1 Primary classification

### This work item is a …

|  |  |
| --- | --- |
| X | Feature |
|  | Building Block |
|  | *Work Task* |
|  | Study Item |

## 2.2 Parent Work Item

|  |
| --- |
| Parent Work / Study Items  |
| Acronym | Working Group | Unique ID | Title (as in 3GPP Work Plan) |
| FS\_5GLAN\_Mgt | SA5 | 950030 | Study on Management Aspect of 5GLAN |

### 2.3 Other related Work Items and dependencies

|  |
| --- |
| Other related Work /Study Items (if any) |
| Unique ID | Title | Nature of relationship |
| 800028 | Feasibility Study on Vertical\_LAN | SA2 stage 2 study item |
| 820017 | 5GS Enhanced support of Vertical and LAN Services | SA2 stage 2 work item |

# 3 Justification

5G LAN-type service requirement has been specified in TS 22.261. 5G LAN-type services has also been specified in TS 23.501 and TS 23.502. A 5G Virtual Network (VN) group consists of a set of UEs using private communication for 5G LAN-type services. The following aspects of 5G LAN-type Services are defined:

* 5G VN group management

5G System supports management of 5G VN Group identification and membership and 5G VN Group data. The 5G VN Group management can be configured by a network administrator or can be managed dynamically by AF.

* PDU Session management

Session management is applicable to 5GLAN-type services with clarification and enhancement, e.g.

- A UE gets access to 5G LAN-type services via a PDU Session of IP PDU Session type or Ethernet PDU Session type.

- A PDU Session provides access to one and only one 5G VN group.

- A dedicated SMF is responsible for all the PDU Sessions for communication of a certain 5G VN group.

- A PDU Session provides unicast, broadcast and multicast communication for the DNN and S-NSSAI associated to a 5G VN group.

* User Plane handling

Three types of traffic forwarding methods are allowed for 5G VN communication, i.e. UPF local switching, N6-based forwarding and N19-based forwarding, to forward traffic within the 5G VN group.

According to the discussion of SA1 and SA2, the management aspect of 5G LAN has missing. This work item aims at specifying 5G management system enhancements to support 5G LAN-type services. The solutions to support this feature has been studied and documented in TR 28.833, including the following aspect:

* Enhancement in the management system of network configuration to support 5G LAN-type services (e.g. the configuration of 5G NF is investigated. The SMF serving 5G VN group communication is required to support 5G VN group identify in NRM IOC.);
* Enhancement in the management system of performance measurement and related KPIs at the VN group level.

It is proposed to convert the concluded solutions and conclusions reached within TR 28.833 into the normative text to TS 28.541, TS 28.552, and TS 28.554.

# 4 Objective

The objective of this work item is to define the normative specifications of the solutions to enhance the management system as per conclusions reached within TR 28.833 for the following aspects:

* Enhancement NRM to support 5G LAN-type services
	+ Configuration management of 5G NF. e.g., the SMF serving 5G VN group communication is required to support 5G VN group identify in NRM IOC;
	+ Configuration management of service area where 5G VN group communication is applicable to the UEs in service or slice profiles;

- Enhancement in the management system of new performance measurement and related KPIs at the VN group level. (e.g. enhancement of performance management to evaluate the consistency of group UE experience)

# 5 Expected Output and Time scale

|  |
| --- |
| New specifications {One line per specification. Create/delete lines as needed} |
| Type  | TS/TR number | Title | For info at TSG#  | For approval at TSG# | Rapporteur |
|  |  |  |  |  |  |

|  |
| --- |
| **Impacted existing TS/TR {One line per specification. Create/delete lines as needed}** |
| **TS/TR No.** | **Description of change**  | **Target completion plenary#** | **Remarks** |
| 28.541 | Management and orchestration of 5G networks; Network Resource Model (NRM); Stage 2 and stage 3. | Dec 2023(SA#102) |  |
| 28.552 | Management and orchestration; 5G performance measurements | Dec 2023(SA#102) |  |
| 28.554 | Management and orchestration; 5G end to end Key Performance Indicators (KPI) | Dec 2023(SA#102) |  |
|  |  |  |  |

# 6 Work item Rapporteur(s)

Yushuang Hu, CMCC, huyushuang@chinamobile.com

# 7 Work item leadership

SA WG5.

# 8 Aspects that involve other WGs

Co-ordination with SA2.

# 9 Supporting Individual Members

|  |
| --- |
| Supporting IM name |
| CMCC |
| Huawei |
| Asia Info |
| ZTE |
| China Telecom |
| China Unicom |