**3GPP TSG-CT WG3 Meeting #135C3-243060**

**Hyderabad, IN, 27 - 31 May, 2024**

**Source: Ericsson**

**Title: New WID on CT aspects of Providing per-subscriber VLAN instructions from UDM and DN-AAA**

**Document for: Agreement**

**Agenda Item: 19.1.1**

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: CT aspects of Providing per-subscriber VLAN instructions from UDM and DN-AAA

Acronym: TEI19\_VLANSUB

Unique identifier: To be allocated

Potential target Release: Rel-19

# 1 Impacts

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

# 2 Classification of the Work Item and linked work items

## 2.1 Primary classification

### This work item is a …

|  |  |
| --- | --- |
|  | Study |
|  | Normative – Stage 1 |
|  | Normative – Stage 2 |
| X | Normative – Stage 3 |
|  | Normative – Other\* |

**\* Other = e.g. testing**

## 2.2 Parent Work Item

|  |  |  |  |
| --- | --- | --- | --- |
| Parent Work / Study Items | | | |
| Acronym | Working Group | Unique ID | Title (as in 3GPP Work Plan) |
| TEI19\_VLANSUB | SA2 | 1030022 | Providing per-subscriber VLAN instructions from UDM and DN-AAA |

### 2.3 Other related Work Items and dependencies

|  |  |  |
| --- | --- | --- |
| Other related Work /Study Items (if any) | | |
| Unique ID | Title | Nature of relationship |
|  |  |  |

**Dependency on non-3GPP (draft) specification: none**

# 3 Justification

SP-240128 as new WID "Providing per-subscriber VLAN instructions from UDM and DN-AAA" (TEI19\_VLANSUB) analysis in deployments for e.g. FWA or wholesale Ethernet services there is a need to add subscriber specific VLAN tag values, or remove VLAN tags only for certain subscribers. There is thus a need to support per-subscriber specific VLAN tag handling. The objective in the work item is to add support for VLAN handling instructions in SM subscription data in UDM/UDR and DN-AAA.

SA#103 approved SP-240128 as new WID "Providing per-subscriber VLAN instructions from UDM and DN-AAA" (TEI19\_VLANSUB) for SA2 normative work.

Considering above, impacts on CT aspects of protocols and interfaces under CT WGs' responsibilities are foreseen and the related work in CT WGs should be carried out within Rel-19.

# 4 Objective

The objective of this work item is to specify the stage 3 aspects to provide per-subscriber VLAN instructions from UDM and DN-AAA according to stage 2 requirements agreed under the stage 2 work item TEI19\_VLANSUB.

The following potential impacts on 3GPP CT working groups are identified (non-exhaustive, additional areas can be identified based on progress in SA2):

CT3

- Potential impacts on Radius and Diameter procedures for DN-AAA server providing the VLAN tag handling information in the secondary authentication/authorization procedure and adding related VLAN tag definition.

- Potential impacts on SMF may determine instructions on VLAN handling during the establishment procedure of an Ethernet type PDU Session based on local configuration, subscription data from UDM or information received from DN-AAA, with the VLAN handling information received from DN-AAA server takes precedence over subscription data from UDM and both take precedence over the local configuration if multiple VLAN handling information is provided.

- Potential impacts on SMF per-subscriber instruction of N6 interface VLAN tag handling upon SMF determination during the establishment procedure of an Ethernet type PDU Session.

CT4

- Potential impacts on adding VLAN tag handling information in the Session Management Subscription data (data needed for PDU Session Establishment).

# 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 |
| 29.503 | Potential impacts on adding VLAN tag handling information in the Session Management Subscription data (data needed for PDU Session Establishment). | TSG CT#108 (June 2025) | CT4 responsibility |
| 29.561 | 1. Potential impacts on Radius and Diameter procedures for DN-AAA server providing the VLAN tag handling information in the secondary authentication/authorization procedure and adding related VLAN tag definition.  2. Potential impacts on SMF may determine instructions on VLAN handling during the establishment procedure of an Ethernet type PDU Session based on local configuration, subscription data from UDM or information received from DN-AAA, with the VLAN handling information received from DN-AAA server takes precedence over subscription data from UDM and both take precedence over the local configuration if multiple VLAN handling information is provided.  3. Potential impacts on SMF per-subscriber instruction of N6 interface VLAN tag handling upon SMF determination during the establishment of an Ethernet type PDU Session. | TSG CT#108 (June 2025) | CT3 responsibility |

# 6 Work item Rapporteur(s)

Maria Tianmei, Liang, Ericsson. maria.liang@ericsson.com

# 7 Work item leadership

CT3

# 8 Aspects that involve other WGs

None

# 9 Supporting Individual Members

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| --- |
| Supporting IM name |
| Ericsson |
| Samsung |
| Verizon |
| Nokia |
| Oracle |
| CableLabs |
| AT&T |