**3GPP TSG-CT WG3 Meeting #128-eC1-211162**

**E-Meeting, 25th February– 05th March 2021**

(revision of CP-202251)

**Source: China Telecom**

**Title: Revised WID on CT aspects on PAP/CHAP protocols usage in 5GS**

**Document for: Approval**

**Agenda Item: 17.2.7**

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 on PAP/CHAP protocols usage in 5GS

## Acronym: PAP\_CHAP

## Unique identifier: 890070

Potential target Release: Rel-17

## 1 Impacts *{ For Normative work, identify the anticipated impacts. For a Study, identify the scope of the study.}*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Affects:** | UICC apps | ME | AN | CN | Others (specify) |
| **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 Feature

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

### 2.2 Parent Work Item

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| Parent Work / Study Items  |
| Acronym | Working Group | Unique ID | Title (as in 3GPP Work Plan) |
|  |  |  |  |

### 2.3 Other related Work Items and dependencies

|  |
| --- |
| Other related Work Items (if any) |
| Unique ID | Title | Nature of relationship |
|  |  | *{optional free text}*  |

**Dependency on non-3GPP (draft) specification**:

## 3 Justification

Due to migration from EPS to 5GS and potential requirements related with legacy deployments for access to corporate networks, e.g. support of PAP/CHAP in DN-AAA server owned by 3rd parties, as indicated in LS S2-2004481, SA2 recommended to support (e)PCO parameters related to PAP / CHAP over 5GS as well and suggested that CT WGs take the lead on this work.

In the new 5GS network deployment, e.g. with standalone SMF, it may also has the potential requirements for access to corporate networks, e.g. support of PAP/CHAP in DN-AAA server or LNS owned by 3rd parties. In this deployment, the support of ePCO parameters related to PAP / CHAP over 5GS is required as well.

To implement above requirements, the stage 3 work to implement the CT aspects of PAP/CHAP protocols usage in 5GS is required.

## 4 Objective

This work item is to implement following objectives related to the CT aspects of PAP/CHAP protocols usage in 5GS. For CT1, the expected work includes:

- Updates to the UE behaviour to support PAP/CHAP in 5GS.

- DNN provided by the upper layers for PAP/CHAP

For CT3, the expected work includes:

- Interworking between the SMF and the DN-AAA server to perform the PAP/CHAP Authentication.

- RADIUS and Diameter Authentication procedures description, when PAP/CHAP is used as the authentication protocol with the legacy DN-AAA server which does not support EAP.

- SMF support of (e)PCO parameters related to PAP/CHAP over 5GS and interworking with EPS.

NOTE: 3GPP SA3 has provided some security observations on the use of PAP/CHAP, the warning should be present in any 5GS TS referring to PAP/CHAP, and it is up to the external network operator to perform the risk assessment to use PAP/CHAP for authentication.

## 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 |
| 24.501 | - Updates to the UE behaviour to support PAP/CHAP in 5GS. | CT#91e (June 2021) | CT1 responsibility |
| 24.526 | * DNN provided by the upper layers for PAP/CHAP
 | CT#91e (June 2021) | CT1 responsibility |
| 29.561 | * Interworking between the SMF and the DN-AAA server to perform PAP/CHAP Authentication.
 | CT#91e (June 2021) | CT3 responsibility |

## 6 Work item Rapporteur(s)

Mingxue Li, China Telecom, limx36@chinatelecom.cn

## 7 Work item leadership

CT3

## 8 Aspects that involve other WGs

## 9 Supporting Individual Members

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| --- |
| **Supporting IM name** |
| China Telecom |
| China Mobile |
| China Unicom |
| Telstra |
| Huawei |
| HiSilicon |
| ZTE |
| CATT |
| vivo |
| OPPO |
| Tencent |
| Ericsson |