**3GPP TSG-CT WG4 Meeting #130C3-253xxx**

**Göteborg, Sweden; 25th – 29th August 2025**

**Source: China Mobile**

**Title: New WID on Protocol for AI Data Collection from UPF**

**Document for: Approval**

**Agenda Item: 19.2**

**3GPP TSG-CT WG4 Meeting #130C4-253062**

**Göteborg, Sweden; 25th – 29th August 2025**

**Source: China Mobile**

**Title: New WID on Protocol for AI Data Collection from UPF**

**Document for: Approval**

**Agenda Item: 19.2.1**

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: WID on Protocol for AI Data Collection from UPF

Acronym: PAIDC\_UPF

Unique identifier:

Potential target Release: Rel-19

# 1 Impacts

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Affects: | UICC apps | ME | AN | CN | Others (specify) |
| Yes |  |  |  | X |  |
| No | X | 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) |
| FS\_PAIDC\_UPF | CT4 | 1040005 | Study on Protocol for AI Data Collection from UPF |

### 2.3 Other related Work Items and dependencies

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

# 3 Justification

The 5G service-based architecture enables flexible information exchange via standardized SBIs, providing a framework for AI/ML functions (e.g., NWDAF) to collect data from diverse sources.

As AI/ML adoption increases for network automation and analytics, an optimized protocol is needed to efficiently collect data from user-plane (e.g., Nupf per TS 29.564) and control-plane (e.g., Nnwdaf per TS 29.520) sources over SBIs. This is critical for high-volume/frequent data transfers to ensure AI/ML system responsiveness and scalability without degrading network performance.

Based on the background above, the SID FS\_PAIDC\_UPF (CP-251039) was approved to study the Protocol for AI Data Collection from UPF. In this SID, the following two key issues were studied:

- Key Issue#1: Identifying and lowering the network performance impacts of intensive data collection from UPF;

- Key Issue#2: Data collection protocol selection.

TR 29.889 was sent for information to TSG#108 and for approval to TSG#109. A WID on Protocol for AI Data Collection from UPF is needed to standardize the solutions agreed for normative work according to the conclusions of the study documented in Clause 8 of TR 29.889.

# 4 Objective

The aim of this work item is to specify the solutions concluded to be standardized in TR 29.889 Clause 8 Conclusions.

Stage 3 objectives:

CT4:

* Enhancement of Nupf\_EventExposure service to enable the NF service consumer to create a UPF event exposure subscription with reduced reporting instructions, and to skip generating event reports according to these instructions;
* Enhancement of Nupf\_EventExposure service to enable bundling of event reports of different UPF event exposure subscriptions;
* Enhancement of Nupf\_EventExposure service to enable the NF service consumer to create a UPF event exposure subscription targeting ANY UE with information that identifying the 5G VN group, PDU session type or RAT;
* Enhancement of PFCP session establishment/modification requests to support SMF sending the 5G VN group identification for a 5G VN group member's PFCP session (PDU session).

CT3:

* Enhancement of Nsmf\_EventExposure service to enable the NF service consumer to create an event exposure subscription with reduced reporting instructions, and to forward these instructions to the UPF;
* Enhancement of Nsmf\_EventExposure service to enable bundling of event reports of different UPF event exposure subscriptions, and to forward these parameters to the UPF;

# 5 Expected Output and Time scale

|  |
| --- |
| New specifications  |
| Type  | TS/TR number | Title | For info at TSG#  | For approval at TSG# | Rapporteur |
| N/A |  |  |  |  |  |

|  |
| --- |
| Impacted existing TS/TR  |
| TS/TR No. | Description of change  | Target completion plenary# | Remarks |
| 29.564 | - Enhancement of Nupf\_EventExposure service to support the event reports reduction, event reports bundling, event subscription optimization using 5G VN group identification, PDU session type or RAT.  | TSG#110 (Dec, 2025) | CT4 |
| 29.508 | - Enhancement of Nsmf\_EventExposure service to support the event reports reduction, event reports bundling. | TSG#110 (Dec, 2025) | CT3 |
| 29.571 | - Potential enhancement on common data type definition. | TSG#110 (Dec, 2025) | CT4 |
| 29.244 | - Enhancement on PFCP session establishment/modification requests to support SMF sending the 5G VN group identification. | TSG#110 (Dec, 2025) | CT4 |

# 6 Work item Rapporteur(s)

Wang Rong, China Mobile, wangrongyjy@chinamobile.com

# 7 Work item leadership

CT4

# 8 Aspects that involve other WGs

None

# 9 Supporting Individual Members

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| --- |
| Supporting IM name |
| China Mobile |
| CATT |
| China Telecom |
| Deutsche Telekom |
| Huawei |
| Nokia |
| Orange |
| SK Telecom |
| vivo |
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