**3GPP TSG-CT3 Meeting #117e C3-214188\_r1**

**E-Meeting, 18th – 27th August 2021**

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **29.514** | **CR** | **0334** | **rev** | **1** | **Current version:** | **17.1.0** |  |
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| *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 |  | Radio Access Network |  | Core Network | **X** |

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| ***Title:***  | Replacement of TSN Terminology in 29.514 |
|  |  |
| ***Source to WG:*** | ZTE |
| ***Source to TSG:*** | CT3 |
|  |  |
| ***Work item code:*** | IIoT |  | ***Date:*** | 2021-8-10 |
|  |  |  |  |  |
| ***Category:*** | F |  | ***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 canbe 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-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)* |
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| ***Reason for change:*** | CR 0296 was agreed in CT3#116e to replace the TSN specific terminologies with generic terminologies, but there are missing changes in Clauses 4.1.3.1 and 4.1.3.2. |
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| ***Summary of change:*** | 4.1.3.1 and 4.1.3.2 upated to:- replace TSN bridge with TSC user plane node, and remove “TSN” from “TSN port”. |
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| ***Consequences if not approved:*** | Inconsistent Terminologies used in this specification. |
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| ***Clauses affected:*** | 4.1.3.1, 4.1.3.2 |
|  |  |
|  | **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 ...  |
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| ***Other comments:*** | This CR does not impact the OpenAPI specification file. |
|  |  |
| ***This CR's revision history:*** |  |

**Additional discussion(if needed):**

**…**

**Proposed changes:**

\*\*\* 1st Change \*\*\*

#### 4.1.3.1 Policy Control Function (PCF)

The PCF (Policy Control Function) is a functional element that encompasses:

- policy control decision and flow based charging control functionalities;

- access and mobility policy decisions for the control of e.g. the UE Service Area Restrictions and RAT/RFSP control; and

- UE Policy for the Access network discovery and selection policy and UE Route Selection Policy (URSP).

The policy control decision and flow based charging control functionalities enable the PCF to provide network control regarding the service data flow detection, gating, QoS and flow based charging (except credit management) towards the SMF/UPF.

The PCF receives session and media related information from the Npcf\_PolicyAuthorization service consumers and notifies them of subscribed traffic plane events.

The PCF may receive from the NF service consumers the request to monitor the requested service and media information and notifies them of the UL/DL/round-trip delay of the requested flows.

The PCF may receive service routing requirements and the indication of receiving notifications about user plane path changes from the Npcf\_PolicyAuthorization service consumers.

The PCF may receive from the NF service consumers the specific required QoS and a prioritized list of alternative QoS profiles and notifies them about the QoS target the access network guarantees.

The PCF checks that the service information provided by the NF service consumer is consistent with the operator defined policy rules before storing the service information.

The PCF uses the received service information and the subscription information when it applies as basis for the policy and charging control decisions.

The PCF derives PCC rules and provisions them to the SMF via the Npcf\_SMPolicyControl service and subscribes to traffic plane events via policy control request triggers as described in 3GPP TS 29.512 [8].

In 5GS interworking with external networks (e.g. TSN network), the PCF:

- notifies the NF service consumer (i.e. TSN AF) about the TSC user plane node and DS-TT port information corresponding to a PDU session;

- enables the NF service consumer (i.e. TSN AF) configures the TSC user plane node and ports by forwarding TSC user plane node management containers and port management containers to the SMF as described in 3GPP TS 29.512 [8];

- notifies the NF service consumer (i.e. TSN AF) about updated TSC user plane node configuration and port configuration by forwarding TSN bridge management containers and port management containers received from the SMF; and

- uses the received QoS and TSC assistance information to derive the policy information delivered in the PCC rule to the SMF as described in 3GPP TS 29.512 [8].

\*\*\* 2nd Change \*\*\*

#### 4.1.3.2 NF Service Consumers

The known NF service consumers are the AF, the NEF and the PCF (for a UE), as defined in 3GPP TS 23.502 [3].

The AF is an element offering control to applications that require the policy and charging control of traffic plane resources; specific user plane paths for the requested traffic, the monitoring of the required service QoS, and/or specific QoS and alternative QoS profiles. The AF uses the Npcf\_PolicyAuthorization service to provide service information to the PCF.

In 5GS interworking with external networks (e.g. TSN network), the TSN AF is an element offering to TSC control functions an interface to 5GS to forward TSC user plane node and port management configuration, and to set the QoS policy required to forward the TSC traffic making use of the 5GS traffic plane resources.

The AFs can be deployed by the same operator offering the access services or can be provided by external third-party service provider. If the AF is not allowed by the operator to access directly the PCF, the AF uses the external exposure framework via NEF to interact with the PCF, as described in subclause 5.20 of 3GPP TS 23.501 [2].

The Network Exposure Function (NEF) supports external exposure of capabilities of network functions.

The PCF providing session management policy control for a UE (i.e. PCF for a PDU session) and the PCF providing UE policy control and/or access and mobility control for this same UE (i.e. PCF for a UE) may be different PCFs. When access and mobility policies depend on traffic plane events (as e.g. application detection control), the PCF for a UE may act as an NF service consumer of the PCF for the PDU session by subscribing to such events.

\*\*\* End of Changes \*\*\*