**3GPP TSG-CT WG3 Meeting #127eC3-231700**

**E-meeting, 17th – 21st, April, 2023 (revision of C3-231277)**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.512** | **CR** | 1063 | **rev** | **1** | **Current version:** | **18.1.0** |  |
|  | | | | | | | | |
| *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:*** | PCC rule authorization for IPTV service | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei | | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | SMPC18 | | | | |  | ***Date:*** | | | 2023-03-15 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-18 |
|  | *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 can be 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-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | There are two kinds of PCC rule shall be authorized by the PCF for the IPTV service, i.e. the PCC rule which allows the IPTV multicast channel and the PCC rule which does not allow the IPTV multicast chanel. But current descriptions does not describe clearly. In this case, gate function is not applicable. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Clarify how the PCF authorizes the PCC rule for IPTV service. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Not clear how to authorize the PCC rule for IPTV service | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.6.2.10, C.2.1.4.1(new), C.3.6.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | | This CR does not impact the OpenAPI file. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

**Additional discussion(if needed):**

**Proposed changes:**

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

#### 5.6.2.10 Type TrafficControlData

Table 5.6.2.10-1: Definition of type TrafficControlData

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| tcId | string | M | 1 | Univocally identifies the traffic control policy data within a PDU session. |  |
| flowStatus | FlowStatus | O | 0..1 | Enum determining what action to perform on traffic. Possible values are: [enable, disable, enable\_uplink, enable\_downlink]. The default value "ENABLED" shall apply, if the attribute is not present and has not been supplied previously.  (NOTE 3) |  |
| redirectInfo | RedirectInformation | O | 0..1 | It indicates whether the detected application traffic should be redirected to another controlled address. | ADC |
| addRedirectInfo | array(RedirectInformation) | O | 1..N | Additional redirection information.  Each element indicates whether the detected application traffic should be redirected to another controlled address. | ADCmultiRedirection |
| muteNotif | boolean | O | 0..1 | Indicates whether application's start or stop notifications are to be muted.  It shall be set to true to indicate application’s start or stop notifications are muted. When it is set to false, it indicates application’s start or stop notifications are not muted. The default value false shall apply, if the attribute is not present and has not been supplied previously. | ADC |
| trafficSteeringPolIdDl  (NOTE 1) | string | O | 0..1 | Reference to a pre-configured traffic steering policy for downlink traffic at the SMF. | TSC |
| trafficSteeringPolIdUl  (NOTE 1) | string | O | 0..1 | Reference to a pre-configured traffic steering policy for uplink traffic at the SMF. | TSC |
| metadata | Metadata | C | 0..1 | This datatype contains opaque information for the service functions in the N6-LAN that is provided by AF and transparently sent to UPF. May be only provided when "trafficSteeringPolIdDl" and/or "trafficSteeringPolIdUl" are provided for the first time. | SFC |
| routeToLocs  (NOTE 1) | array(RouteToLocation) | O | 1..N | A list of location(s) to which the traffic shall be routed for the AF request. | TSC |
| maxAllowedUpLat | UintegerRm | O | 0..1 | Indicates the target user plane latency in units of milliseconds. The SMF may use this value to decide whether edge relocation is needed to ensure that the user plane latency does not exceed the value. | AF\_latency |
| easIpReplaceInfos | array(EasIpReplacementInfo) | O | 1..N | Contains EAS IP replacement information. | EASIPreplacement |
| traffCorreInd | boolean | O | 0..1 | Indication of traffic correlation. If it is included and set to "true", traffic should be correlated; The default value "false" applies, if the attribute is not present and has not been supplied previously. (NOTE 2) |  |
| tfcCorreInfo | TrafficCorrelationInfo | O | 0..1 | Contains the information for traffic correlation. | CommonEASDNAI |
| simConnInd | boolean | O | 0..1 | Indication of simultaneous connectivity temporarily maintained for the source and target PSA. If it is included and set to "true", temporary simultaneous connectivity should be kept. The default value "false" applies, if the attribute is not present and has not been supplied previously. | SimultConnectivity |
| simConnTerm | DurationSec | C | 0..1 | Indication of the minimum time interval to be considered for inactivity of the traffic routed via the source PSA during the edge re-location procedure.  It may be included when the "simConnInd" attribute is set to true. | SimultConnectivity |
| upPathChgEvent | UpPathChgEvent | O | 0..1 | Contains the information about the AF subscription to UP path change events. | TSC |
| steerFun | SteeringFunctionality | O | 0..1 | Indicates the applicable traffic steering functionality. | ATSSS |
| steerModeDl | SteeringMode | O | 0..1 | Determines the traffic distribution rule across 3GPP and Non-3GPP accesses to apply for downlink traffic. | ATSSS |
| steerModeUl | SteeringMode | O | 0..1 | Determines the traffic distribution rule across 3GPP and Non-3GPP accesses to apply for uplink traffic. | ATSSS |
| mulAccCtrl | MulticastAccessControl | O | 0..1 | Indicates whether the service data flow, corresponding to the service data flow template, is allowed or not allowed. The default value "NOT\_ALLOWED" applies, if the attribute is not present and has not been supplied previously.  (NOTE 3) | WWC |
| NOTE 1: If SFC feature is not supported, traffic steering policy identifier(s) (i.e. "trafficSteeringPolIdDl" attribute and/or "trafficSteeringPolIdUl" attribute) and N6 traffic routing requirements (i.e. "routeToLocs" attribute) are mutually exclusive; otherwise, they can be provided simultaneously.  NOTE 2: The TSC feature shall be supported in order to support this attribute. The Indication of traffic correlation shall be provided only when all the PDU sessions related to the 5G VN group member UEs should be correlated by a common DNAI in the user plane for the traffic as described in 3GPP TS 23.501 [2], clause 5.6.7.1 and clause 5.29.  NOTE 3: The "flowStatus" attribute and the "mulAccCtrl" attribute are mutually exclusive | | | | | |

\*\*\* Next Change \*\*\*

#### C.2.1.4.1 Gate Function

Functionality as described in clause 4.2.6.2.2 applies with the following exceptions for the traffic of a PDU session over wireline access:

- for the IPTV service, the "mulAccCtrl" attribute within the TrafficControlData data structure to which the PCC rule refers shall be used to describe if the gate is open or closed instead of the "flowStatus" attribute.

\*\*\* Next Change \*\*\*

### C.3.6.1 IPTV service support

If the "WWC" feature is supported by the SMF and PCF as defined in clause 5.8, when the PCF fetches the Multicast Access Control information from the UDR as defined in 3GPP TS 29.519 [15] applicable for a SUPI or Internal Group Id during the PDU session establishment or receives the notification of the Multicast Access Control information from the UDR as defined in 3GPP TS 29.519 [15] applicable for a SUPI(s) and/or Internal Group Id(s) and/or DNN/S-NSSAI combination(s) during the PDU session modification, the PCF authorizes the Multicast Access Control information. For each impacted PDU Session that corresponds to the Multicast Access Control information, the PCF shall determine the PCC rule(s) that are generated based on the Multicast Access Control information as follows:

- for the multicast channel(s) which is allowed indicated in the Multicast Access Control information, the PCF shall include the corresponding multicast address(es) within the "flowInfos" attribute of the PCC rule and include the "mulAccCtrl" attribute set to "ALLOWED" within a Traffic Control Data instance which the PCC rule refers; and/or

- for the multicast channel(s) which is not allowed indicated in the Multicast Access Control information, the PCF shall include the corresponding multicast address(es) within the "flowInfos" attribute of the PCC rule and include the "mulAccCtrl" attribute set to "NOT\_ALLOWED" within a Traffic Control Data instance which the PCC rule refers to.

NOTE 1: The "flowStatus" attribute is not included in this Traffic Control Data instance. The gate fuction is not applicable to IPTV service, and the control is done with the "mulAccCtrl" attribute.

NOTE 2: Separate PCC Rules are used to convey the information related to allowed and not allowed multicast channel(s).

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