**3GPP TSG-SA WG4 Meeting #131S4-250221**

**CH, Geneva, 17 – 21 February 2025**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **510** | **CR** |  | **rev** |  | **Current version:** |  |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network |  | Core Network | **X** |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | [5G\_RTP\_Ph2] RTC provisioning enhancement for N6-unmarked PDUs | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** |  | | | | | | | | | |
| ***Source to TSG:*** | S4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5G\_RTP\_Ph2 | | | | |  | ***Date:*** | | | 1 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | C |  | | | | | ***Release:*** | | | Rel-19 |
|  | *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:*** | | PDU Set and End of Data Burst marking only applies to RTP PDUs since marking is done via an RTP header extension. Hence, PDUs belonging to protocols such as RTCP, STUN, etc. cannot be marked i.e., they do not carry the PDU Set Information.  In Rel-18, SA2 has agreed that the PSA UPF marks, in the downlink, each N6-unmarked PDU ("lone PDU") with PDU Set Information into a PDU Set. If the UPF receives a PDU that does not belong to a PDU Set based on Protocol Description for PDU Set identification, the UPF still maps it to a PDU Set and determines the PDU Set Information by implementation-specific means.  This means that for N6-unmarked PDUs, PDU Set Information must be determined by the UPF. For some elements of the PDU Set Information, this is straightforward, e.g., PSN=0 since the PDU Set has only one PDU, PSSize is equal to the size of the N6-unmarked PDU (since there is only one PDU in the PDU Set). However, for PSI, the UPF may only assign a preconfigured value (e.g. by the network operator) which may not reflect the application requirements.  To address this issue, SA4 concluded in TR 26.822 that for N6-unmarked PDUs, senders need to signal application-defined PSI values to 5GC, which requires extensions to the RTC provisioning feature defined in TS 26.510. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | The RTC configuration is enhanced to allow for indication of preconfigured PSI values . | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Not possible to indicate application-defined PSI values for N6-unmarked PDUs to 5GC. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 2, 8.10.1, 8.10.3.1, 8.10.3.3 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | | A summary of the related solution in TR 26.822 is provided in **[S4-250144](https://www.3gpp.org/ftp/tsg_sa/WG4_CODEC/TSGS4_131_Geneva/Docs/S4-250144.zip)**. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

\* \* \* \* First change \* \* \* \*

## 8.10 Real-time Media Communication provisioning API

### 8.10.1 Overview

The Real-time Media Communication provisioning API is used by the Media Application Provider to supply configuration information, in the form of an RTCConfiguration resource (specified in clause 8.10.3) that is used by the Media Client to gain access to real-time media communication (RTC) functionality of the Media AS. The provisioning API allows for the enablement and/or advertisement of ICE (STUN, TURN, and/or SWAP) services to facilitate communication between Media Clients in an RTC-based media delivery session. These facilitation services may either be provided by the Media AS itself or provisioned by the Media AF. The provisioning API also allows for indication of PDU Set Importance [26522] values defined by the Media Application Provider for N6-unmarked PDUs.

\* \* \* \* Second change \* \* \* \*

### 8.10.3 Data model

#### 8.10.3.1 RTCConfiguration resource

Table 8.10.3.1-1: Definition of RTCConfiguration resource

| Property name | Data Type | Cardinality | Description |
| --- | --- | --- | --- |
| edgeResources‌ConfigurationId | ResourceId | 0..1 | A reference to an Edge Resources Configuration resource (see clause 8.6.2).  When present, indicates that the Media AS supporting this RTC Configuration shall be realised as a set of one or more EAS instances configured per the referenced resource. |
| enableStunService | boolean | 0..1 | If true, the Media AS shall provide a STUN service to the Media Session Handler for use in RTC-based media delivery sessions initiated in the context of the parent Provisioning Session.  If false the Media Application Provider may populate the stunEndpoints property.  If omitted, the default value shall be false. |
| stunEndpoints | array(Service‌Endpoint‌Access‌Specification) | 0..1 | A list of one or more trusted STUN server endpoints populated by the Media Application Provider or else by the Media AF that may be used as ICE candidates for RTC-based media delivery sessions. |
| enableTurnService | boolean | 0..1 | If true, the Media AS shall provide a TURN service to the Media Session Handler for use in RTC-based media delivery sessions initiated in the context of the parent Provisioning Session.  If false the Media Application Provider may populate the turnEndpoints property.  If omitted, the default value shall be false. |
| turnEndpoints | array(Service‌Endpoint‌Access‌Specification) | 0..1 | A list of one or more trusted TURN server endpoints populated by the Media Application Provider or else by the Media AF that may be used as ICE candidates for RTC-based media delivery sessions. |
| enableSwapService | boolean | 0..1 | If true, the Media AS shall provide a SWAP service to the Media Session Handler for use in RTC-based media delivery sessions initiated in the context of the parent Provisioning Session.  If false the Media Application Provider may populate the swapEndpoints property.  If omitted, the default value shall be false. |
| swapEndpoints | array(Service‌Endpoint‌Access‌Specification) | 0..1 | A list of one or more trusted WebRTC Signalling Server endpoints populated by the Media Application Provider or else by the Media AF that support the SWAP protocol that may be used by the application for RTC-based media delivery sessions in the context of the parent Provisioning Session. |
| unmarkedPDUInfoList | array(unmarkedPduInfo) | 0..N | A list of one or more mappings between an application protocol, (optionally with an associated packet type) and a PDU Set Importance [26522] value. |

\* \* \* \* Third change \* \* \* \*

#### 8.10.3.3 UnmarkedPduInfo

Table 8.10.3.3-1: Definition of UnmarkedPduInfo data type

| Property name | Data Type | Cardinality | Description |
| --- | --- | --- | --- |
| protocol | string | 1..1 | Application protocol name |
| packetType | integer | 0..1 | Packet type specific to the protocol |
| pduSetImportance | integer | 1..1 | PDU Set Importance [26522] value between 0 and 15 (inclusive) |

\* \* \* \* Fourth change \* \* \* \*

# 2 References

…

[26522] 3GPP TS 26.522: "5G Real-time Media Transport Protocol Configurations".