**3GPP TSG-SA5 Meeting #143-e *S5-223106***

e-meeting, 9 - 17 May 2022

**Source: Ericsson**

**Title: Adding service identifier based solution to clause 5.3**

**Document for: Approval**

**Agenda Item: 7.5.2**

# 1 Decision/action requested

**Include the proposed changes in TR 28.826.**

# 2 References

[1] 3GPP TR 28.826: " Study on Nchf charging services phase 2 improvements and optimizations"

# 3 Rationale

Background for clause 5.3 and new solutions in clause 5.3 based on service identifier and use of string for rating group.

# 4 Detailed proposal

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| **First change** |

### 5.3.1 General

The information that may be used to assist the determine of reservation in the CCS is not defined except for the rating group. This means that for an immediate event or in an initial request the information about the event or session is limited.

A rating group isn’t defined in the context of SBI, it is however defined in TS 32.299 [x] as the same as the rating group of RFC 4006 [x] obsoleted by RFC 8506 [x] and linked to the charging key defined in TS 23.203 [x], the corresponding spec for SBI is 23.503 [x]. In TS 23.503 [x] the charging key is defined as “information used by the CHF for rating purposes”.

The rating group gathers a set of services that is subject to the same cost and rates. One rating group can contain several rates if all rates are applicable to all services belonging to the rating group and if quota is granted it can be consumed by all services, belonging to the rating group, equally. How a service is identified is dependent on the network function.

This means that the cost and rates can be determined by the rating group but not the consumption rate of the quota i.e., how fast quota is used by the services belonging to the same rating group, and in the extension how much quota that should be reserved for a specific request.

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| **Second change** |

#### 5.3.5.x Solution #3.x Enhancement of rating group with service identifier

A possible solution for key issues 3a, 3b, and 3c, enhancement of input to CHF rating.

Any information in the PCC rule could potentially be connected to a specific service identifier, this means that a specific QoS can be identified by the service identifier.

A solution could be to allow the service identifier as well as the rating group in the request for quota, to be able to better allocate the right amount of quota needed at that moment for that rating group. The service identifier would in this case only be included as indicative i.e., which services that may be started. This means that both the service identifier(s) that triggered the request (if any) as well as the already started would be included in the request in the case of an update.

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| **Third change** |

#### 5.3.5.y Solution #3.y Enhancement of rating group and service identifier using string

A possible solution for key issues 3a, 3b, and 3c, enhancement of input to CHF rating.

Both the rating group and service identifiers are today defined as unsigned 32-bit integers, even if the number of groups and identifiers can be 4294967296 it still this means that there is a limited amount of information that can be transferred. It is also not possible to group or in other way sort the rating groups and service identifiers in any easy way. Changing the rating group and service identifiers to strings would allow more information to be transported, grouping based on common information in the strings, and human readable information.

Having the rating group as string will also allow it to be used as the key in OpenAPI maps.

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| **End of changes** |