**3GPP TSG-CT WG4 Meeting #104-eC4-213xyz**

**E-Meeting, 19th – 28th May 2021 (was C4-213289)**

**Source: Ericsson**

**Title: Evaluation of solutions for KI#1**

**Spec: 3GPP TR 23.700-12 v0.4.0**

**Agenda item: 6.2.1**

**Document for: Decision**

**1. Introduction**

-

**2. Reason for Change**

Provide an evaluation of solutions proposed for KI#1 ("Routing of IMS traffic via a localized UPF") in 3GPP TR 23.700-12 and select a solution for Rel-17 normative work.

**3. Conclusions**

-

**4. Proposal**

It is proposed to agree the following changes to 3GPP TR 23.700-12 v0.4.0.

\* \* \* First Change \* \* \* \*

## 7.1 Evaluation of solutions addressing key issue #1

Table 7.1-1: Pros and Cons of solutions for KI#1

|  |  |  |
| --- | --- | --- |
| Solution Id | Pros | Cons |
| Solution#1 | 1. If no NPLI is enabled at P-CSCF, there is no latency increased at call establishment, but only at registration procedure.
2. It does not impact the PCF
3. It meets the requirements by simple protocol extensions to Nudm, Nudr, and Nhss-ims (or Cx/Sh)
 | 1. It impacts multimedia control plane IMS functions (e.g. HSS, S-CSCF) which are not managing user plane traffic.
2. It impacts legacy diameter interfaces (e.g. Cx).
3. It requires a complex configuration since each UPF instance added needs to be configured at each and every IMS node, even if they serve the same area and they require the same MGW involved in the multimedia session.
4. It does not solve the scenario of UPF reallocation after the IMS registration.
 |
| Solution#4 | 1. It does not impact multimedia control plane IMS functions (e.g. HSS, S-CSCF), but only IMS nodes managing media plane.
2. It does not impact legacy diameter interfaces.
3. It is independent of how many UPF instances are added in the network since it uses the UPF service area (serving scope), regardless of how many UPF instances serve the same area. This result in a much simpler configuration and maintenance in IMS nodes.
4. The media plane selection is based on the current UPF when the multimedia session is established, not in the UPF selected at PDU session establishment.
5. It reuses existing SBI service for IMS AF/P-CSCF produced by PCF in a natural way to retrieve, in addition to Network Provided Location information, the UPF service area.
6. The whole procedure is performed when the requesting IMS node is going to make use of the information, instead of doing in a proactive manner and impacting interfaces and internal S-CSCF registration binding storage with information which might not be used and might also be obsolete in the case of UPF reallocation.
 | 1. It requires impacts in SBI interfaces (N5/N7)
2. It requires N5 interaction if the current UPF is requested at Multimedia Session establishment. This interaction is not additional if NPLI is requested.

NOTE x: The benefits of the N5 interaction, even if the latency might be increased at establishment (if no NPLI is required) is that during the lifetime of the multimedia session (e.g. voice call) the packets sent/received are being forwarded using optimal user plane routing. |

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