**SA WG2 Meeting #163** **S2-240xxxx**

**27 - 31 May, 2024, Jeju, South Korea (revision of S2-240)**

**Source: Nokia (Rapporteur)**

**Title: SoH Questions**

**Document for: Approval**

**Agenda Item: 19.3**

**Work Item / Release: FS\_XRM\_Ph2 / Rel-19**

*Abstract of the contribution: SoH questions*

# KI#1

1. Should application layer FEC awareness at RAN be used by RAN for the case in which RAN is congested? NO: two objections (Ericsson, MediaTek)
   1. YES: 13
   2. NO: 4
2. ~~If FEC is applied, which AL-FEC mechanisms is your preferred method?~~ 
   1. ~~Static approach/control plane based (NG-AP)~~
   2. ~~Dynamic approach/User plane based (GTP-U)~~
3. In R18, RAN indicates to CN whether PDU Set handling is supported or not. In order to support Alternative QoS and QoS Notification control, should PDU Set handling supported for UL/DL be separated? However, PDU Set handling support in the RAN may be different in each Flow direction (UL, DL) (i.e. in the RAN, UE).

**Should RAN provided indication for PDU Set handling support be split into DL PDU Set handling support and UL PDU Set handling support?**

* **YES**
* **NO**

**(1.3: further discussion may be needed offline)**

# KI#2: PDU Set info identification in case of E2E encryption

1. The endpoints such as UE and AS should be able to provide application layer metadata to network. One or more of the following mechanisms should be supported over N6 to identify the meta data (including PDU Set information, also other meta data such as burst size) for encrypted DL media traffic.

**Shall the following method(s) be supported?**

* 1. Category #1: Media over QUIC
     1. **YES: 12**
     2. **NO: 5; 4 objections (Nokia, Ericsson, Lenovo, Meta)**
  2. Category #2: UDP option (reference: sol #11, #12, #27)
     1. **YES: 4**
     2. **NO: 5; 5 objections (Nokia, Ericsson, CMCC, CT, MediaTek)**
  3. Category #3: Proxying-UDP-in-HTTP + QUIC-Aware Proxying method (reference: sol #24, #26)
     1. **YES: 7**
     2. **NO: 7; 5 objections (CMCC, CT, Huawei, Tencent, Vivo)**

NOTE: It is either the UPF that detects whether the traffic from the UE is containing QUIC or another type of traffic and/or the AF pre-configures the 5GS before the XRM traffic starts.

* 1. Category #4: GTP-U (reference: sol #25)
     1. **YES: 3**
     2. **NO: 9: 5 objections (CMCC, Tencent, Mediatek, Ericsson, Nokia)**

# KI#3: DCSF marking over N3/N9

1. SMF derives the Transport Level Marking for DL packets (N3/N9 interface) based on PDU Set Importance (PSI) value(s) for a given PDU Set and sends to UPF via FAR.

Should this be supported?

* **YES: 9**
* **NO: 5 🡪3 objections (Samsung, Google, Ericsson)**

1. SMF derives the Transport Level Marking for DL packets (N3/N9 interface) based on AF/AS (e.g. meta data) for a given PDU Set and sends to UPF via FAR.

Should this be supported?

* **YES: 2**
* **NO: 7 🡪 3 objections (Samsung, Ericsson, Intel)**

# KI#5

1. It is assumed that the information is provided by the application server. What kind of traffic characteristics is provided by the UPF to the NG-RAN?
   1. Burst Size – **YES/NO**
   2. Time to next burst – **YES/NO**
   3. Periodicity – YES/NO
2. Should the packet detection rules be extended to support detection of data boost indication carried in N6 DL packet header (ref# sol#16)? **YES/NO**

# KI#7

1. Is there a need to update the conclusion for DSCP per PSI? **YES/NO**