**SA WG2 Meeting #149ES2-220xxxx**

**February 14th – 25th, 2022, Electronic**

**Source: Ericsson**

**Title: Scope and Assumptions for the DetNet study**

**Document for: Approval**

**Agenda Item: 9.6**

**Work Item / Release: Rel-18**

*Abstract of the contribution: Add scope and assumptions for the DetNet study based on the SID.*

# 1 Discussion

It is proposed to add the scope of the DetNet study and assumptions for the work based on the agreed SID. The statements regarding the scope to be addressed are listed under the Scope section, while assumptions regarding the technical approach are listed under Architecture Assumptions section.

# 2 Proposal

It is proposed to update TR 23.700-46 as proposed below:

\*\*\* FIRST CHANGE \*\*\*

# 1 Scope

The objective of this Technical Report is to study whether and how to enable 3GPP support for DetNet such that a mapping is provided between the central DetNet controller entity (as defined in IETF) and the 5G system. Mapping involves translation of DetNet traffic profile and flow specification to 5GS QoS parameters and TSCAI. The study also considers which information needs to be exposed from the 5G system to the DetNet controller .

The study scope assumes the following:

* Only IP based DetNet is in the scope of the work; MPLS based DetNet is out of scope.
* DetNet over Ethernet TSN is not in the scope of the work as it can be supported based on existing 3GPP and IETF standards.
* The solutions support a request from the DetNet controller entity including DetNet configuration for flow path establishment.
* Since synchronization mechanisms that can be used are out of the scope in IETF DetNet specifications, the time synchronization framework in Release 17 is not modified for this study.
* Existing 3GPP routing mechanisms can be re-used for DetNet; no new routing function in the 3GPP system is to be defined.
* The existing filtering mechanisms can be re-used in the UE and in the UPF to identify the traffic for QoS differentiation.
* It is out of scope to extend 3GPP multicast mechanisms, but the existing multicast capabilities can be re-used for DetNet communications.
* It is out of scope to support for edge DetNet node functions in the 3GPP network.
* \*\*\* NEXT CHANGE \*\*\*

# 4 Architecture Assumptions

The study has the following architecture assumptions:

* IP based DetNet traffic is carried in PDU Sessions of IP type.
* The mapping functionality for DetNet is realized in the TSCTSF.
* The solutions should reuse the functionality of the TSC framework defined in Release 17 where applicable.

\*\*\* END OF CHANGES \*\*\*