3GPP TSG SA WG 4 Meeting 126 TDoc S4-231xxxx

Chicago, USA, 13 – 17 November 2023

**Title: LS on Support of interworking between SA4 RTC and IMS**

**Response to:**

**Release: Release 18**

**Work Item: FS\_eiRTCW**

**Source:** **SA WG 4**

**To:** **SA WG 2, CT WG 3**

**Cc: -**

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**Attachments:**

# 1 Overall description

SA4 is addressing the Real-Time media Communication (RTC) architecture and protocols for realizing WebRTC-based immersive real time media communication services on 5G system in the following Release-18 WIs/SI.

* WI (Stage 2): GA4RTAR (SP-220672)
* WI (Stage 3): iRTCW (SP-230977)
* SI: FS\_eiRTCW (SP-230166)

In the framework of FS\_eiRTCW, SA4 is studying the enhancement on the RTC specifications developed in the above work items. As one of the issues of FS\_eiRTCW, SA4 is addressing the issue regarding the interworking between RTC and IMS networks. This solution for the issue is focussing on the interworking of basic & legacy audio call.

A solution for interworking between a WebRTC-based service and IMS has been specified in 3GPP TS 23.228 Annex U, where the WebRTC endpoint can access an IMS network via a user-network interface (UNI) by introducing eP-CSCF and eIMS-AGW in the IMS network.



Figure 1: WebRTC IMS architecture and reference model in 3GPP TS 23.228

As another solution, SA4 (FS\_eiRTCW) is currently studying a solution where a WebRTC-based RTC communication network inter-connects to an IMS network as an external IP multimedia network by applying the interworking model described in 3GPP TS 29.162, with the following motivation:

* For many operators, the existing IMS network is operated as a network for telephony services. Then, the functionalities of IMS network need to comply with regulations for telephony service in the country (e.g., high-availability, support of emergency services, support of lawful interception, high speech quality and high security-level.).

- On the other hand, most of WebRTC-based services are provided on the internet currently, then these services may not need to comply with all aspects of regulation for telephony services. In such case, operators may not choose to enhance the existing IMS network, but to deploy a new RTC network for RTC service and connect the RTC network to IMS network for basic & legacy audio call, with the following aspects:

\* Total cost for realizing RTC service and basic & legacy audio call between RTC and IMS clients.

\* Separation of network operations - avoid that services with different regulatory/reliability requirements need to be handled in the same facility/equipment.



Figure 2: Interworking Model for IM CN Subsystem to IP Multimedia Network in 3GPP TS 29.162

For this NNI-based solution, SA4 is now studying the interworking at the RTC network, as follows:

- WebRTC-specific signalling protocol and media capabilities are terminated by the interworking function at the edge of the RTC network.

- The interworking function defined as a new entity of the RTC network connects to the IMS network (e.g., IBCF) using SIP and media capabilities that comply with IMS specifications via Network to Network Interface (NNI) as described in 3GPP TS 29.162.

**SA4 would like to ask SA2 and CT3:**

- Are there any potential impacts on existing IMS specifications from the above NNI-based solution (connecting the WebRTC-based RTC communication network to IMS network, by applying the interworking model specified in 3GPP TS 29.162), considering that the solution uses the interface of existing 3GPP IMS specification without any modifications?

# 2 Actions

**To SA2 and CT3**

**ACTION: SA4 respectfully asks SA2 and CT3 to provide feedback to the question.**

# 3 Dates of next TSG SA WG 4 meetings

SA4#127 29th January - 2nd February 2024, Sophia Antipolis, France