**3GPP TSG-SA WG4 Meeting #129-eS4-24xxxx**

**Electronic, 19 – 23 August 2024**

Title: Reply LS on Binding Information

Response to: S4-241419 (S2-2405454)

Release: Rel-18

Work Item: NG\_RTC

Source: SA WG 4

To: SA WG 2

Cc: -

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Attachments: -

**1. Overall Description:**

SA4 would like to thank SA2 for the LS on Binding information in [S4-241419/S2-2405454].

SA4 has discussed the questions in the LS and concluded as described below:

SA2 has described IMS data channel procedures in clause AC.7 in TS 23.228. In Figure AC.7.1-1 “Bootstrap Data Channel set up Signalling Procedure”, both UE#1 and UE#2 have established bootstrap data channels with both originating and terminating DCSF (via corresponding MF/MRF). In steps 20—23, both UEs download the application lists from his/her local and remote DCSF. The downloads can be done in parallel and independently from each other. Download of application lists are expected to be done by the UE without user interaction.

**Q1**: Does SA4 see any issue with the above description?

**A1**: Yes, letting both peers UE#1 and UE#2 independently choose applications from both local and remote application lists will not work, since there is no guarantee that both peers choose the same application. If an application list to choose from is sent to a remote UE or not is a matter of DCSF policy configuration and DCSF webserver content, serving peer UEs. Therefore, while it is not in any way ruled out, letting a local UE choose an application from a remote UE’s list should be avoided, or at least made with great care to limit the risk of choice mismatch or collision. Instead, it should be a preferable principle to let a local UE choose from its local list and the remote UE can be informed about the chosen application together with a choice to accept or reject that. That principle can be mirrored such that both UEs gets to make a choice in a single session, but that would result in both UEs having two simultaneously active applications in the session, one that was chosen by UE#1 and one that was chosen by UE#2.

In Figure AC.7.2.1-1 “Person-to-Person Application Data Channel set up Signalling Procedure” in step 1, UE#1 is updating the IMS audio/video session to an IMS data channel session and sends the corresponding SDP offer towards UE#2. The updated SDP contains the requested application data channel media information and the associated DC application binding information.

**Q2**: Does SA4 specifications describe whether the DC application associated with the DC application binding information as described above can be downloaded by UE#1 from either local or remote DCSF?

**A2**: No, no such need was anticipated. If UE#2, as in the above example, receives an SDP offer with application binding information and if UE#2 did not itself choose to use an application with that identification, the application must have been chosen by the peer UE#1 (see A1 above) and should therefore be provided by the remote (UE#1) DCSF.

In step 9-11 of AC.7.2.1-1, the corresponding SDP offer is sent to UE#2. The flow describes that UE#2, upon receiving the SDP offer, may need to download the corresponding DC Application signalled in the SDP offer.

**Q3**:Does SA4 agree it is a valid scenario that UE#2 has not downloaded the DC application when receiving the SDP offer for the given DC application?

**A3**: Yes. Please note from A1 and A2 above that UE#2 need generally not choose anything or actively request a specific application, but the related application should shortly become available to UE#2 as a response to the initial HTTP GET through one of the (100-series) BDC between DCSF#1 and UE#2, because of the previous UE#1 choice with DCSF#1.

In step 9-11 of Figure AC.7.2.1-1, if the UE#2 has not downloaded the application prior receiving the SDP offer, the SDP offer must contain DC application binding information allowing UE#2 to download the corresponding data channel application.

**Q4**: Does SA4 specifications describe such kind of DC application binding information, especially considering that in the above scenario the UE#2 can download the application from potentially two different sources, i.e. either from its local or from its remote DCSF. Does the DC application binding information indicate to UE#2 whether the given application can be downloaded from local or remote DCSF of UE#2?

**A4**: Yes, existing application binding should be enough. See A2 and A3 above.

**Q5**: Assuming UE#2 has downloaded the application lists from both local and remote DCSF prior receiving the SDP offer as described above, can UE#2 determine the correct application list based on the req-app-id attribute of 3gpp-req-app in the SDP described in clause 6.2.13 in TS 26.114?

**A5**: See A1 above. Providing UE#2 with an application choice from DCSF#1 that is independent from the application choice made by UE#1 from DCSF#1 would be a potential cause of failure and should be avoided.

**2. Actions:**

**To SA WG2 group.**

**ACTION: SA4 respectfully asks SA WG2 to take the above information into account and to provide feedback, if any.**

**3. Date of Next SA4 Meetings:**

SA4#130 18th - 22nd November 2024 Orlando, US

SA4#131 17th – 21st February 2025 Geneva, CH