**3GPP TSG-SA WG6 Meeting #38-e S6-201025**

**e-meeting, 20th – 31st July 2020 ()**

**Source: Intel**

**Title: pCR on Application Context Transfer involving the AC**

**Spec: 3GPP TS 23.558 V0.3.0**

**Agenda item: 7.5**

**Document for: Approval**

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**1. Introduction**

This contribution proposes a new procedure for Application Context Transfer as a result of a UE mobility event. This procedure relies on existing Service Provisioning and EAS discovery procedures for discovering the target EAS(s). It also relies on AC(s) being triggered to initiate and supervise the transfer of application context.

**2. Reason for Change**

This solution has several advantages: (1) It re-uses existing procedures; (2) it minimizes core NW involvement and overhead; (3) it provides a solution for some missing needs in other proposals such as: Ensuring the TCP/IP connection with the T-EAS, synchronization of application contiguous activity while context is being transferred and sstrieght forward identification of the appliaction context that needs to be transferred.

**3. Conclusions**

<Conclusion part (optional)>

**4. Proposal**

It is proposed to agree on the following changes to 3GPP TS 23.558 V0.3.0

\* \* \* Next Change \* \* \* \*

#### 8.8.2.X Initiation by Edge Enabler Client using regular EAS Discovery

##### 8.8.2.X.1 General

This procedure handles Application Context Relocation as a result of the UE moving to a new location which is outside the service area of the serving EDN. It further relies on the EEC being triggered by the UE’s modem and it assumes that the EEC obtains the UE’s new location from the modem.

This procedure is based on Service Provisioning (as specified in subclause 8.3) and EAS Discovery (as specified in subclause 8.5) procedures to discover the target EESs and EASs that shall serve the ACs as a result of the UE’s new location, and that will receive the ACs’ application context from the serving EASs.

For the sake of simplicity, the procedure describes the transition required to relocate one application context in the new EAS. But the actual design should take in consideration that there might be several AC deployed in the UE, some of which will have to establish a connection with a new target EAS and have their application context relocated from the source EAS to the target EAS. In addition, the source EASs may be deployed in one or several EDNs, and the target EAS may also be deployed in other different EDNs.

This procedure relies on an interface between the EEC and ACs. Such interface is specified in the architecture as EDGE-5, but its details are out of the scope of this specification.

##### 8.8.2.X.2 Procedure

Pre-conditions:

1. The Application Client at the UE already has a connection to the source Edge Application Servers.

2. The Edge Enabler Client is authorised to perform service provisioning

3. The Edge Enabler Client is triggered by the UE’s modem and obtains the UE’s new location, or is triggered by another entity such as an ECS notification

NOTE X: This procedure is applicable only for Edge-aware ACs and EASs.

Editor’s note: Information flows of the procedure are FFS.



Figure 8.8.2.x.2-1: Application Context Relocation initiated by the EEC and ACs

1. The EEC is triggered as a result of a UE mobility event, and provided with the UE’s new location

2. The EEC performs Service Provisioning (as specified in subclause 8.3) for all active applications. Since the location of the UE has changed, this procedure results in a list of T-EESs that are relevant to the supplied application and the new location of the UE.

NOTE: There may be cases in which the change in UE’s location does not trigger a need to change the serving EDN. In these cases, the subsequent steps will not take place, the EEC will remain connected to the serving EASs and the AC will remain connected to the serving EASs.

3. Using the provisioned T-EESs, the EEC performs EAS discovery (as specified in subclause 8.5) for the desired T-EASs by querying the T-EESs that were established in Step 2

4. The AC is triggered to start Application Context Transfer.

5. The AC initiates the transfer of application context from the S-EAS to the T-EAS. There may be different ways of transferring context and they are all outside the scope of this specification

6. After the application context is completed, the AC remains connected to the T-EAS, disconnects from the S-EAS and the EEC is informed of the completion.

7. If no ACs remain connected to EASs in the S-EDN, the EEC disconnects (de-registers) from the corresponding S-EES.

Editor’s note: Evaluate the need an appropriate step for supporting EEC context transfer from S-EES(s) to T-EES(s)

Editor’s note: Evaluate the possibility of specifying Step 7 as optional and rely on other means to tear down the registration (and/or subscription for notification) of the EEC from the S-EES