**3GPP TSG-SA WG6 Meeting #55 S6-23xxxx**

**22 – 26 May 2023 Berlin, Germany (revision of S6-23xxxx)**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **23.558** | **CR** | **0xxx** | **rev** | **-** | **Current version:** | **18.2.0** |  |
|  | | | | | | | | |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network |  | Core Network | **X** |

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|  | | | | | | | | | | |
| ***Title:*** | CES in ENS | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** | S6 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | EDGEAPP\_Ph2 | | | | |  | ***Date:*** | | | 2023-05-10 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | B |  | | | | | ***Release:*** | | | Rel-18 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | For ENS, given the GSMA OPG reply in S6-2223088 “OP B is serving the end users of Operators B regardless of the region where they are”, this CR offers a solution with CES facilitation.  In case of ENS and there is no EES deployed everywhere in the whole PLMN, the CES can be used to serve EEC. This also implies that the CES can be part of OP. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Update ENS scenario with CES. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Missing ENS deployment scenario. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 6.2d, 6.5.xx (new), 8.18.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

\* \* \* First Change \* \* \* \*

## 6.2d Architecture for enabling cloud applications with edge applications, with CES support

Figure 6.2d-1 illustrates the architecture for enabling cloud applications along with the edge applications, when CES is used.

NOTE: Edge and cloud servers can utilize SEAL NM service but for simplicity such an interaction is not depicted in the figure.



Figure 6.2d-1: Architecture for enabling cloud application with edge applications

Cloud Application Server (CAS) residing in the clould DN may need to interact with the Cloud Enabler Server (CES) for interworking, e.g. for service continuity. The CAS and EAS interaction is Application Data Traffic, which is out-of-scope of this specification.

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

### 6.5.xx CLOUD-4

CLOUD-4 enables interaction between EEC and CES.

CLOUD-4 supports:

a) EAS discovery procedure in ENS.

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

### 8.18.1 General

In the following clauses, the OP-A is a partner of OP-B and OP-B is the leading OP to serve the UE.

Editor's note: The terms "ECSP" and "OP" needs to be aligned in this clause.

The information and procedure of service provisioning and EAS discovery described in the following clauses are same as clause 8.3.3 and clause 8.5, only differences are described in this clause for edge node sharing.

Editor's note: Reusing existing procedures and information flows (e.g., service provisioning or EAS discovery) for Edge Node Sharing is FFS, it is also FFS how to merge the procedures related with ECS-ER in this clause with 8.17 support of roaming and federation.

The leading ECSP can deploy its EESs in EDNs providing full edge coverage for the UE in the whole PLMN. If the leading ECSP has CES deployed and partial edge coverage in the whole PLMN, the leading ECSP can rely on CES to provide edge service facilitation in ENS. The ECS of the leading ECSP determines whether to provide EES or CES of the leading ECSP to the UE, depending on whether the UE can be served by EES or CES of the leading ECSP.

During service provisioning, if the ECS (ECSP-B) returns CES (ECSP-B) to the EEC, the CES (ECSP-B) replaces EES (ECSP-B) in subsequent procedures (e.g. offering EASs from partner ECSP to EEC).

\* \* \* END of Change \* \* \* \*