**3GPP TSG-SA WG6 Meeting #47-e S6-220698**

**e-meeting, 14th – 22nd February 2022 (revision of S6-22xxxx)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **23.558** | **CR** | **0093** | **rev** | **-** | **Current version:** | **17.3.0** |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network |  | Core Network | **X** |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Corrections to the ECS configuration information | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Qualcomm | | | | | | | | | |
| ***Source to TSG:*** | S6 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | EDGEAPP | | | | |  | ***Date:*** | | | 2022-03-30 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | F |  | | | | | ***Release:*** | | | Rel-17 |
|  | *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-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | The ECS configuration information is incorrect and incomplete due to the following reasons:   1. The current description of the ECS Provider ID does not allow a non-ECSP MNO to be the provider of ECS. This violates the involved entities and relationships described in the TS. 2. An ECS can support multiple ECSPs, but the current set of IEs cannot convey such information. 3. ECSs can have associated spatial validity conditions, see TS 23.502 and TS 23.548. The SMF provides this information to the UE, for the UE to use it accordingly. However, the current set of IEs cannot convey such information.   Along with these changes, the following EN needs to be solved:  Editor's Note: Information Elements of ECS configuration information are FFS. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | The following changes are applied:   1. The description of ‘ECS provider identifier’ IE is updated to clarify that the IE denotes the ID of the Edge Configuration Server’s provider and not of an ECSP. 2. Additional IEs are added to list ECSPs which are supported by the ECS. 3. An additional IE is added to include ECS’s Spatial Validity Conditions. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | ECS configuration information remains incorrect and incomplete. Related EN also remains unsolved. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 8.3.2.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 \* \* \* \*

#### 8.3.2.1 General

ECS configuration information consists of one or more endpoint information (e.g. URI(s), FQDN(s), IP address(es)) of ECS(s), and optionally the corresponding ECS Provider Identifier. ECS configuration information can be

- pre-configured with the EEC;

- configured by an edge-aware AC;

- configured by the user;

- provisioned by MNO through 5GC procedure if the UE has the capability to deliver the ECS configuration information to the EEC on the UE (see 3GPP TS 23.548 [20], clause 6.5.2); or

- derived from HPLMN identifier for non-roaming scenario or from VPLMN identifier for roaming scenario.

NOTE: How the ECS configuration information is configured to the EEC by the AC, user, or pre-configuration is out of scope of the present specification.

It may be possible to provide the ECS configuration information to the EEC from the 5GC if the UE has the capability to deliver the ECS configuration information to the EEC on the UE.

If the ECS configuration information is provided by 5GC and available at the EEC, the EEC shall use the information for the initial provisioning request. Otherwise, the EEC shall use pre-configured ECS address for the initial provisioning if ECS configuration information is preconfigured with the EEC.

Table 8.3.2.1-1 describes the information elements of ECS configuration information for an ECS.

Table 8.3.2.1-1: ECS configuration information per ECS

|  |  |  |
| --- | --- | --- |
| Information element | Status | Description |
| ECS address | M | Endpoint information of ECS (e.g. URI, FQDN, IP address) |
| ECS Provider Identifier | O | The identifier of the ECS provider (e.g., the MNO or a 3rd party service provider). |
| Spatial Validity Condition | O | Spatial validity condition, as described in 3GPP TS 23.548 [20], associated with the ECS. |
| List of supported ECSPs (NOTE 1) | O | List of ECSP IDs whose information is available via this ECS. |
| Authentication Method (NOTE 2) | O | This IE indicates the selected authentication method for mutual authentication between ECS and EEC. |
| NOTE 1: This IE shall be included when the ECS configuration information is provisioned by the MNO through the 5GC procedure. | | |
| NOTE 2: This IE shall indicate a selected TLS authentication method (for e.g., as specified in TS 33.558 one of the following: certificate, AKMA, GBA). | | |