**3GPP TSG-CT WG1 Meeting #136eC1-223abcd**

**E-meeting, 12-20 May 2022 (was C1-223780)**

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| --- |
| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **24.501** | **CR** | **4395** | **rev** | **1** | **Current version:** | **17.6.1** |  |
|  |
| *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** |

|  |
| --- |
|  |
| ***Title:***  | Editorial corrections |
|  |  |
| ***Source to WG:*** | Huawei, HiSilicon |
| ***Source to TSG:*** | C1 |
|  |  |
| ***Work item code:*** | 5GProtoc17 |  | ***Date:*** | 2022-05-17 |
|  |  |  |  |  |
| ***Category:*** | **D** |  | ***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 canbe 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 specification contains several editorials to be fixed. |
|  |  |
| ***Summary of change:*** | Editorials fixed. |
|  |  |
| ***Consequences if not approved:*** | Editorial corrections remains which can impact readability of the specification. |
|  |  |
| ***Clauses affected:*** | 9.11.4.34 |
|  |  |
|  | **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 \* \* \* \*

#### 9.11.4.34 ECS address

The purpose of the ECS address information element is to indicate the ECS address (either IPv4 address, IPv6 address, or FQDN) and the associated spatial validity condition.

The ECS address information element is coded as shown in figure 9.11.4.34-1, figure 9.11.4.34-2, table 9.11.4.34-1, and table 9.11.4.34-2.

The ECS address information element is a type 6 information element with minimum length of 8 octets and a maximum length of 65538 octets.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |  |
| ECS address IEI | octet 1 |
| Length of ECS address contents | octet 2octet 3 |
| Type of ECS address | Type of spatial validity condition | octet 4 |
| ECS address | octet 5octet a |
| Spatial validity condition contents | octet (a+1)\*octet n\* |

Figure 9.11.4.34-1: ECS address information element

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |  |
| Length of spatial validity condition contents | octet (a+1)octet (a+2) |
| Spatial validity information 1 | octet boctet c |
| Spatial validity information 2 | octet (c+1)\*octet d\* |
| … | octet (d+1)\*octet e\* |
| Spatial validity information N | octet (e+1)\*octet n\* |

Figure 9.11.4.34-2: Spatial validity condition contents

Table 9.11.4.34-1: ECS address information element

|  |
| --- |
| Type of ECS address (octet 4, bit 1 to 4) |
| Bits |
| 4 | 3 | 2 | 1 |  |
| 0 | 0 | 0 | 0 | IPv4 |
| 0 | 0 | 0 | 1 | IPv6 |
| 0 | 0 | 1 | 0 | FQDN |
| 1 | 1 | 1 | 1 | Unspecified |
|  |
| All other values are spare. The receiving entity shall ignore an ECS address IE with type of ECS address containing a spare value. |
|  |
| Type of spatial validity condition (octet 4, bit 5 to 8) |
| Bits |
| 8 | 7 | 6 | 5 |  |
| 0 | 0 | 0 | 0 | No spatial validity condition |
| 0 | 0 | 0 | 1 | Geographical service area |
| 0 | 0 | 1 | 0 | Tracking area |
| 0 | 0 | 1 | 1 | Country-wide |
|  |
| All other values are spare. The receiving entity shall ignore a spatial validity condition with type of spatial validity condition containing an unknown value. |
|  |
| If the type of ECS address indicates IPv4, then the ECS address field contains an IPv4 address in octet 5 to octet 8. |
|  |
| If the type of ECS address indicates IPv6, then the ECS address field contains an IPv6 address in octet 5 to octet 20 and is encoded according to IETF RFC 4291 [RFC4291]. |
|  |
| If the type of ECS address indicates FQDN, then the ECS address field contains in octet 5 the length of FQDN value and in octet 6 to octet a an FQDN value encoded as defined in subclause 19.4.2 in 3GPP TS 23.003 [4]. |
|  |
| If the type of ECS address indicates unspecified, then the remaining fields of ECS address information element shall be passed to the upper layers. |
|  |
| Spatial validity condition contents (octet (a+1)\* to n\*) |
| The spatial validity condition contents contain a variable number of spatial validity condition information. |

Table 9.11.4.34-2: Spatial validity condition contents

|  |
| --- |
| If the type of spatial validity condition of the ECS address indicates No spatial validity condition, then the spatial validity condition information field is empty. |
| If the type of spatial validity condition of the ECS address indicates geographical service area, then the spatial validity condition information field contains a geographical service area which is specified by geographical descriptions as defined in 3GPP TS 23.032 [4B]. |
|  |
| If the type of spatial validity condition of the ECS address indicates tracking area, then the spatial validity condition information field contains a TAI as defined in subclause 9.11.3.8 starting from octet 2. |
|  |
| If the type of spatial validity condition of the ECS address indicates country-wide, then the spatial validity condition information field contains an MCC as defined in in ITU-T Recommendation E.212 [42], annex A. The first MCC digit is coded in bit 1 to 4 of the octet b, the second MCC digit is coded in bit 5 to 8 of the octet b, and the third MCC digit is coded in bit 1 to 4 of the octet b+1. Bit 5 to bit 8 of the octet b+1 shall be padded with 1. If only two digits are used for for MCC, octet b+1 shall be padded with 1.  |
|  |

\* \* \* End of Change \* \* \* \*