**3GPP TSG-SA WG6 Meeting #62 S6-243375**

**Maastricht, The Netherlands, 19-23 August 2024 (revision of S6-243040)**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **23.282** | **CR** | **0361** | **rev** | **1** | **Current version:** | **19.3.0** |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME | **x** | Radio Access Network |  | Core Network | **x** |

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|  | | | | | | | | | | |
| ***Title:*** | Include application data in MCData IPcon request and response | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Kontron Transportation France, Nokia, UIC | | | | | | | | | |
| ***Source to TSG:*** | SA6 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | FRMCS\_Ph5 | | | | |  | ***Date:*** | | | 2024-08-01 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | B |  | | | | | ***Release:*** | | | Rel-19 |
|  | *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:*** | | This CR adds a possibility to send application specific data in the MCData IPcon point-to-point request and response messages. In FRMCS the IP address of the target data host or the IP address of the DNS server are examples of such data. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Adding a new IE for application metadata container to the MCData IPcon point-to-point request and response messages | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Originating data host cannot initiate end to end communication to the target data host(s) using the MCData IPcon transport service. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 7.14.2.1.1, 7.14.2.1.2, 7.14.2.2.2. | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | | Title has change, please also change in 3GU | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

\* \* \* \* 1st change \* \* \* \*

##### 7.14.2.1.1 MCData IPcon point-to-point request

Table 7.14.2.1.1-1 describes the information flow of the MCData IPcon point-to-point request sent from the MCData client to the MCData server.

Table 7.14.2.1.1-1: MCData IPcon point-to-point request (MCData client to MCData server)

|  |  |  |
| --- | --- | --- |
| Information element | Status | Description |
| MCData ID | M | The MCData identity of the originator MCData user; |
| Functional alias | O | The associated functional alias of the originator MCData user; |
| MCData ID | O  (NOTE 2) | The MCData identity of the target MCData client IP connectivity is requested. |
| Functional alias | O (NOTE 2) | The functional alias of the target MCData client. |
| SDP offer | M | Offered media parameters describing the requested characteristics of the IP tunnel between the MCData UEs. |
| Requested Priority  (NOTE 3) | O | Application priority level requested for this communication. |
| Location Information | O  (NOTE 1) | Actual location information of the originating MCData user; |
| Time Limit | O | Proposed time limit of the requested IP connectivity (1min- infinite); |
| Establishment reason | O | IP connectivity establishment reason |
| Application metadata container (see NOTE 4) | O | Implementation specific information that is communicated to the recipient |
| NOTE 1: This information contains the latest available location information of the requesting MCData user that may be different to the latest available location information in the MC system.  NOTE 2: At least one identity shall be present. If both are present the MCData ID shall be used to route the request and the functional alias is just for information.  NOTE 3: The predefined priority of the MC service user is applied by the MCData server if the requested priority is not present or not accepted by the MCData server.  NOTE 4: How the MCData client gets the content of this information element is outside the scope of the present document. | | |

Table 7.14.2.1.1-2: MCData IPcon point-to-point request (MCData server to MCData client)

|  |  |  |
| --- | --- | --- |
| Information element | Status | Description |
| MCData ID | M | The MCData identity of the originator MCData user; |
| MCData ID | M | The MCData identity of the target MCData client IP connectivity is requested. |
| SDP offer | M | Offered media parameters describing the requested characteristics of the IP tunnel between the MCData UEs. |
| Location Information | O  (NOTE 1) | Actual location information of the originating MCData user; |
| Time Limit | O | Proposed time limit of the requested IP connectivity (1min- infinite); |
| Establishment reason | O | IP connectivity establishment reason |
| Application metadata container (see NOTE 2) | O | Implementation specific information that is communicated to the recipient |
| NOTE 1: This information contains the latest available location information of the requesting MCData user.  NOTE 2: How the MCData client gets the content of this information element is outside the scope of the present document. | | |

\* \* \* \* 2nd change \* \* \* \*

##### 7.14.2.1.2 MCData IPcon point-to-point response

Table 7.14.2.1.2-1 describes the information content of the MCData IPcon point-to-point response as answer to MCData IPcon point-to-point request.

Table 7.14.2.1.2-1: MCData IPcon point-to-point response

|  |  |  |
| --- | --- | --- |
| Information element | Status | Description |
| MCData ID | M | The MCData identity of the targeted MCData user. |
| MCData ID | M | The MCData identity of the requesting MCData user. |
| SDP | O | Media parameters selected. This shall be present if the IP connectivity establishment result is successful. |
| Time Limit | O | Negotiated time (1 min – infinite) |
| IP connectivity status | M | IP connectivity establishment result |
| Application metadata container (see NOTE) | O | Implementation specific information that is communicated to the recipient |
| NOTE: How the MCData client gets the content of this information element is outside the scope of the present document. | | |

\* \* \* \* 3rd change \* \* \* \*

##### 7.14.2.2.2 Procedure

The procedure in figure 7.14.2.2.2-1 describes the case where an IP connectivity capable MCData client is initiating a point-to-point IP connectivity with another IP connectivity capable MCData client.

Pre-conditions:

- The total data volume limit, e.g. daily time limit or total data volume per day does not restrict the establishment of an IP connectivity IP data exchange.

- MCData clients are linked with individual data hosts.

- MCData clients belong to the same MCData system.

- The data hosts linked with the MCData clients already have an IP address allocated.

- MCData clients have IP connectivity capabilities.

- The linked data hosts are authorized to use the MCData clients to establish an IP connectivity.

NOTE: How the data host is authorized to use the MCData client is out of the scope of the present document.

- The MCData server has subscribed to the MCData functional alias controlling server within the MC system for functional alias activation/de-activation updates.

- MCData client 1 understands the correspondence between the IP addresses of target data hosts and MCData client 2. How this relationship is determined is out of scope of the present document.

- Optionally, the MCData clients may have activated a functional alias to be used.



Figure 7.14.2.2.2-1: Establishment of a point-to-point IP connectivity

1. MCData client 1 has IP Data to send to MCData client 2 and initiates an IP connectivity point-to-point request.

2. MCData client 1 sends a MCData IPcon point-to-point request towards the MCData server. The MCData IPcon point-to-point request contains either the MCData ID of MCData client 2 or its associated functional alias. MCData user at MCData client 1 may include its associated functional alias. The MCData client 1 may include additional implementation specific information in the application metadata container in the request.

3. MCData server checks whether MCData user at MCData client 1 is authorized to send an MCData IPcon point-to-point request and checks if MCData client 2 is authorised to receive the IP connectivity service. If a functional alias is used to address the target MCData user, the MCData server resolves the functional alias to the corresponding MCData ID(s) for which the functional alias is active and proceed with step 4 otherwise proceed with step 6.

4. The MCData server responds back to MCData client 1 with a functional alias resolution response message that contains the resolved MCData ID.

5. If the MCData server replies with a MCData functional alias resolution response message, the MCData client 1 assumes the MCData IPcon point-to-point request in step 2 is rejected and sends a new MCData IPcon point-to-point request towards the resolved MCData ID.

6. MCData server initiates the MCData IPcon point-to-point request towards the determined MCData client 2.

NOTE: MCData client 2 corresponds to the MCData user(s) after resolution of the functional alias.

7. MCData client 2 sends a MCData IPcon point-to-point response to the MCData server that contains the information if the request is accepted or the reason of rejection. If accepted, the MCData client 2 may include the following information elements:

i) data transmission time limit.

ii) application metadata container.

8. MCData server forwards the MCData IPcon point-to-point response of MCData client 2 to MCData client 1.

9. The MCData server applies transmission and reception control and the necessary policy to ensure that appropriate data is transmitted between the MCData clients.

10. MCData client 1 and MCData Client 2 have successfully established media plane for data communication and MCData client 1 and MCData client 2 exchange IP Data.

\* \* \* \* End of changes \* \* \* \*