**3GPP TSG-CT WG1 Meeting #134-e *Rev\_*C1-221398**

**E-meeting, 17th – 25th February 2022**

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
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|  | **24.301** | **CR** | **3709** | **rev** | **1** | **Current version:** | **17.5.0** |  |
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| *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 |  | Radio Access Network |  | Core Network | **X** |

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|  |
| ***Title:***  | Release NAS connection |
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| ***Source to WG:*** | Apple, Nokia, Nokia Shanghai Bell |
| ***Source to TSG:*** | C1 |
|  |  |
| ***Work item code:*** | MUSIM |  | ***Date:*** | 2022-02-10 |
|  |  |  |  |  |
| ***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 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)* |
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| ***Reason for change:*** | In clause 5.6.1.1 when a MUSIM capable UE is initiating Service Request procedure, for cases p and q:p) the network supports the NAS signalling connection release and the UE supports MUSIM, in EMM-CONNECTED mode requests the network to release the NAS signalling connection and, if the network supports the paging restriction, optionally includes paging restrictions; orq) the network supports the reject paging request and the UE supports MUSIM, in EMM-IDLE mode when responding to paging rejects the paging request from the network, requests the network to release the NAS signalling connection and, if the network supports the paging restriction, optionally includes paging restrictions.the UE is requesting the network to release the NAS signalling connection. As such the MME should initiate the release of the NAS signalling connection on completion of the Service Request procedure. |
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| ***Summary of change:*** |  When the MUSIM capable UE is requesting the network to release the NAS signalling connection, the MME initiates the release of the NAS signalling connection on completion of Service Request procedure. |
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| ***Consequences if not approved:*** | The release of the NAS signalling connection is not initiated in timely manner when requested by UE impacting user experience on UE. |
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| ***Clauses affected:*** | 5.6.1.4.1, 5.6.1.4.2 |
|  |  |
|  | **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:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

\*\*\* First change \*\*\*

##### 5.6.1.4.1 UE is not using EPS services with control plane CIoT EPS optimization

If EMM-REGISTERED without PDN connection is supported by the UE and the MME and the MME has no active EPS bearer contexts for the UE, for cases a, b, c and o in clause 5.6.1.1, upon receipt of the SERVICE REQUEST message or the EXTENDED SERVICE REQUEST message for packet services, after completion of the EMM common procedures according to clause 5.6.1.3, if any, the MME shall send a SERVICE ACCEPT message.

If EMM-REGISTERED without PDN connection is supported by the UE and the MME and the UE has no active EPS bearer contexts, for cases a, b, c and o in clause 5.6.1.1, the UE shall treat the receipt of a SERVICE ACCEPT message as successful completion of the procedure. Otherwise, for cases a, b, c, h, k, l and o in clause 5.6.1.1, the UE shall treat the indication from the lower layers that the user plane radio bearer is set up as successful completion of the procedure. The UE shall reset the service request attempt counter, stop the timer T3417 and enter the state EMM-REGISTERED.

If the service type information element in the EXTENDED SERVICE REQUEST message indicates "mobile terminating CS fallback or 1xCS fallback" and the CSFB response IE, if included, indicates "CS fallback accepted by the UE", or if the service type information element in the EXTENDED SERVICE REQUEST message indicates "mobile originating CS fallback or 1xCS fallback" or "mobile originating CS fallback emergency call or 1xCS fallback emergency call", the network initiates CS fallback or 1xCS fallback procedures.

If the EPS bearer context status IE is included in the EXTENDED SERVICE REQUEST message, the network shall deactivate all those EPS bearer contexts locally (without peer-to-peer signalling between the network and the UE) which are active on the network side but are indicated by the UE as being inactive. If a default EPS bearer context is marked as inactive in the EPS bearer context status IE included in the EXTENDED SERVICE REQUEST message, and this default bearer is not associated with the last remaining PDN connection of the UE in the MME, the MME shall locally deactivate all EPS bearer contexts associated to the PDN connection with the default EPS bearer context without peer-to-peer ESM signalling to the UE. If the default bearer is associated with the last remaining PDN connection of the UE in the MME, and EMM-REGISTERED without PDN connection is supported by the UE and the MME, the MME shall locally deactivate all EPS bearer contexts associated to the PDN connection with the default EPS bearer context without peer-to-peer ESM signalling to the UE.

If the SERVICE REQUEST message or the EXTENDED SERVICE REQUEST message for packet services, was sent in a CSG cell and the CSG subscription has expired or was removed for a UE, but the UE has a PDN connection for emergency bearer services established, the network shall accept the SERVICE REQUEST message or the EXTENDED SERVICE REQUEST message for packet services and deactivate all non-emergency EPS bearers locally. The emergency EPS bearers shall not be deactivated.

For cases d in clause 5.6.1.1, and for case e in clause 5.6.1.1 when the CSFB response was set to "CS fallback accepted by the UE", the UE shall treat the indication from the lower layers that the inter-system change from S1 mode to A/Gb or Iu mode is completed as successful completion of the procedure. The EMM sublayer in the UE shall indicate to the MM sublayer that the CS fallback procedure has succeeded. The UE shall stop the timer T3417ext or T3417ext-mt, respectively, and enter the state EMM-REGISTERED.NO-CELL-AVAILABLE.

If the service request procedure was initiated in EMM-IDLE mode and an EXTENDED SERVICE REQUEST message was sent in a CSG cell and the CSG subscription has expired or was removed for the UE, the network need not perform CSG access control if the service type information element indicates "mobile originating CS fallback emergency call or 1xCS fallback emergency call".

For cases f and g in clause 5.6.1.1:

- if the UE receives the indication from the lower layers that the signalling connection is released with the redirection indication to cdma2000® 1x access network or the indication from the lower layers that a change to cdma2000® 1x access network for 1xCS fallback has started (see 3GPP TS 36.331 [22]), the UE shall consider the service request procedure successfully completed, stop timer T3417 and enter the state EMM-REGISTERED.NO-CELL-AVAILABLE;

- if the UE receives the dual Rx/Tx redirection indication from the lower layers (see 3GPP TS 36.331 [22]), the UE shall select cdma2000® 1x access network for 1xCS fallback, consider the service request procedure successfully completed, stop timer T3417 and enter the state EMM-REGISTERED.NORMAL-SERVICE; and

- if the UE receives a cdma2000® signalling message indicating 1xCS fallback rejection by cdma2000® 1x access network, the UE shall abort the service request procedure, stop timer T3417 and enter the state EMM-REGISTERED.NORMAL-SERVICE.

For cases i and j in clause 5.6.1.1, if the UE receives the indication from the lower layers that the signalling connection is released, the UE shall consider the service request procedure successfully completed, stop timer T3417 and enter the state EMM-REGISTERED.NO-CELL-AVAILABLE.

For cases p and q in clause 5.6.1.1, when the UE supporting MUSIM in the EXTENDED SERVICE REQUEST message sets the Request type to "NAS signalling connection release" or to "Rejection of paging" in the UE request type IE, the UE shall treat the receipt of SERVICE ACCEPT message as the successful completion of the procedure and the UE shall reset the service request attempt counter, stop timer T3417 and enter the state EMM-REGISTERED.

If the SERVICE REQUEST message or an EXTENDED SERVICE REQUEST message for packet services was used, the UE shall locally deactivate the EPS bearer contexts that do not have a user plane radio bearer established upon successful completion of the service request procedure, except for the case when the UE supporting MUSIM in the EXTENDED SERVICE REQUEST message sets the Request type to "NAS signalling connection release" or to "Rejection of paging" in the UE request type IE.

If the EXTENDED SERVICE REQUEST message is for CS fallback or 1xCS fallback and radio bearer establishment takes place during the procedure, the UE shall locally deactivate the EPS bearer contexts that do not have a user plane radio bearer established upon receiving a lower layer indication of radio bearer establishment. The UE does not perform local deactivation of EPS bearer contexts upon receiving an indication of inter-system change from lower layers.

If the EXTENDED SERVICE REQUEST message is for CS fallback or 1xCS fallback and radio bearer establishment does not take place during the procedure, the UE does not perform local deactivation of the EPS bearer context. The UE does not perform local deactivation of EPS bearer contexts upon receiving an indication of inter-system change from lower layers.

If a service request is received from a UE with a LIPA PDN connection, and if:

- a GW Transport Layer Address IE value identifying a L-GW is provided by the lower layer together with the service request, and the P-GW address included in the EPS bearer context of the LIPA PDN connection is different from the provided GW Transport Layer Address IE value (see 3GPP TS 36.413 [23]); or

- no GW Transport Layer Address is provided together with the service request by the lower layer;

then the MME shall locally deactivate all EPS bearer contexts associated with any LIPA PDN connection. Furthermore, if no active EPS bearer contexts remain for the UE, the MME shall not accept the service request as specified in clause 5.6.1.5.

If a service request is received from a UE with a SIPTO at the local network PDN connection, and if the PDN connection is a:

1) SIPTO at the local network PDN connection with stand-alone GW, and if:

- a LHN-ID value is provided by the lower layer together with the service request, and the LHN-ID value stored in the EPS bearer context of the SIPTO at the local network PDN connection is different from the provided LHN-ID value (see 3GPP TS 36.413 [23]); or

- no LHN-ID value is provided together with the service request by the lower layer; or

2) SIPTO at the local network PDN connection with collocated L-GW, and if:

- a SIPTO L-GW Transport Layer Address IE value identifying a L-GW is provided by the lower layer together with the service request, and the P-GW address included in the EPS bearer context of the SIPTO at the local network PDN connection is different from the provided SIPTO L-GW Transport Layer Address IE value (see 3GPP TS 36.413 [23]); or

- no SIPTO L-GW Transport Layer Address is provided together with the service request by the lower layer;

then, the MME takes one of the following actions:

- if all the remaining PDN connections are SIPTO at the local network PDN connections, the MME shall not accept the service request as specified in clause 5.6.1.5; and

- if a PDN connection remains that is not SIPTO at the local network PDN connection and the network decides to set up the S1 and radio bearers, the MME shall upon completion of the setup of the S1 bearers initiate an EPS bearer context deactivation procedure with ESM cause #39 "reactivation requested" for the default EPS bearer context of each SIPTO at the local network PDN connection (see clause 6.4.4.2).

NOTE: For some cases of CS fallback or 1x CS fallback the network can decide not to set up any S1 and radio bearers.

Upon receipt of the SERVICE REQUEST message, the MME shall delete any stored paging restriction preferences for the UE and stop restricting paging.

If the UE supporting MUSIM does not include the Paging restriction IE in the EXTENDED SERVICE REQUEST message, the MME shall delete any stored paging restrictions for the UE and stop restricting paging.

For cases p and q in clause 5.6.1.1 when the UE supporting MUSIM sets the Request type to "NAS signalling connection release" or to "Rejection of paging" in the UE request type IE in the EXTENDED SERVICE REQUEST message and if the UE requests restriction of paging by including the Paging restriction IE, the MME:

- if accepts the paging restriction, shall include the EPS additional request result IE in the SERVICE ACCEPT message and set the Paging restriction decision to "paging restriction is accepted". The MME shall store the paging restrictions of the UE and enforce these restrictions in the paging procedure as described in clause 5.6.2; or

- if rejects the paging restriction, shall include the EPS additional request result IE in the SERVICE ACCEPT message and set the Paging restriction decision to "paging restriction is rejected", and shall discard the received paging restriction. The MME shall delete any stored paging restriction for the UE and stop restricting paging; and

shall initiate the release of the NAS signalling connection after the completion of the service request procedure.

When the E-UTRAN fails to establish radio bearers for one or more EPS bearer contexts, then the MME shall locally deactivate the EPS bearer contexts corresponding to the failed radio bearers based on the lower layer indication from the E‑UTRAN, without notifying the UE.

If the UE is not using EPS services with control plane CIoT EPS optimization, the network shall consider the service request procedure successfully completed in the following cases:

- when it receives an indication from the lower layer that the user plane is setup, if radio bearer establishment is required;

- otherwise when it receives an indication from the lower layer that the UE has been redirected to the other RAT (GERAN or UTRAN in CS fallback, or cdma2000® 1x access network for 1xCS fallback).

\*\*\* Next change \*\*\*

##### 5.6.1.4.2 UE is using EPS services with control plane CIoT EPS optimization

For case a in clause 5.6.1.1, upon receipt of the CONTROL PLANE SERVICE REQUEST message with Control plane service type indicating "mobile terminating request", after completion of the EMM common procedures according to clause 5.6.1.3:

1) if the MME needs to perform an EPS bearer context status synchronization

- for an EPS bearer context associated with Control plane only indication; or

- for an EPS bearer context not associated with Control plane only indication, there is no downlink user data pending to be delivered via the user plane, and the UE did not set the "active" flag in the Control plane service type IE to 1; or

2) if the control plane data back-off time for the UE is stored in MME and the MME decides to deactivate congestion control for transport of user data via the control plane,

then the MME shall send a SERVICE ACCEPT message.

Furthermore the MME may:

1) initiate the transport of user data via the control plane procedure or any other NAS signalling procedure;

2) if supported by the UE and required by the network, initiate the setup of the user plane radio bearer(s); or

3) send a NAS signalling message not related to an EMM common procedure to the UE if downlink signalling is pending.

For case b in clause 5.6.1.1, upon receipt of the CONTROL PLANE SERVICE REQUEST message with Control plane service type indicating "mobile originating request", after completion of the EMM common procedures according to clause 5.6.1.3, if any, if the MME needs to perform an EPS bearer context status synchronization

- for an EPS bearer context associated with Control plane only indication; or

- for an EPS bearer context not associated with Control plane only indication, there is no downlink user data pending to be delivered via the user plane, and the UE did not set the "active" flag in the Control plane service type IE to 1,

then the MME shall send a SERVICE ACCEPT message.

Furthermore, the MME may:

1) initiate release of the NAS signalling connection upon receipt of an indication from the ESM layer (see clause 6.6.4.2), unless the MME has additional downlink user data or signalling pending;

2) initiate the setup of the user plane radio bearer(s), if downlink user data is pending to be delivered via the user plane or the UE has set the "active" flag in the Control plane service type IE to 1;

3) send an ESM DATA TRANSPORT message to the UE, if downlink user data is pending to be delivered via the control plane;

4) send a NAS signalling message not related to an EMM common procedure to the UE if downlink signalling is pending; or

5) send a SERVICE ACCEPT message to complete the service request procedure, if no NAS security mode control procedure was initiated, the MME did not send a SERVICE ACCEPT message as specified above to perform an EPS bearer context status synchronization, and the MME did not initiate any of the procedures specified in item 1 to 4 above.

NOTE 1: The MME can initiate the setup of the user plane radio bearer(s) if the MME decides to activate the congestion control for transport of user data via the control plane.

For case m in clause 5.6.1.1, upon receipt of the CONTROL PLANE SERVICE REQUEST message with Control plane service type indicating "mobile originating request" and the "active" flag in the Control plane service type IE set to 1:

1) if the MME accepts the request, the MME shall initiate the setup of the user plane radio bearer(s) for all active EPS bearer contexts of SGi PDN connections that are established without control plane only indication.

2) if the MME does not accept the request, the MME shall send a SERVICE ACCEPT message to complete the service request procedure.

NOTE 2: The MME takes into account the maximum number of user plane radio bearers supported by the UE, in addition to local policies and the UE's preferred CIoT network behaviour when deciding whether to accept the request to establish user plane bearer(s) as described in clause 5.3.15. If the MME accepts the request, all SGi PDN connections are considered as established without Control plane only indication.

NOTE 3: In this release of the specification, a UE in NB-S1 mode can support a maximum of 2 user plane radio bearers (see clause 6.5.0).

For case c in clause 5.6.1.1, upon receipt of the CONTROL PLANE SERVICE REQUEST message with Control plane service type indicating "mobile originating request" and without an ESM message container IE, after completion of the EMM common procedures according to clause 5.6.1.3, if any, the MME proceeds as follows:

If the MME needs to perform an EPS bearer context status synchronization

- for an EPS bearer context associated with Control plane only indication; or

- for an EPS bearer context not associated with Control plane only indication, and there is no downlink user data pending to be delivered via the user plane,

then the MME shall send a SERVICE ACCEPT message.

Furthermore, the MME may:

1) initiate the setup of the user plane radio bearer(s), if downlink user data is pending to be delivered via the user plane;

2) send an ESM DATA TRANSPORT message to the UE, if downlink user data is pending to be delivered via the control plane;

3) send a NAS signalling message not related to an EMM common procedure to the UE, if downlink signalling is pending; or

4) send a SERVICE ACCEPT message to complete the service request procedure, if no NAS security mode control procedure was initiated, the MME did not send a SERVICE ACCEPT message as specified above to perform an EPS bearer context status synchronization, and the MME did not initiate any of the procedures specified in item 1 to 3 above.

If the UE supporting MUSIM does not include the Paging restriction IE in the CONTROL PLANE SERVICE REQUEST message, the MME shall delete any stored paging restrictions for the UE and stop restricting paging.

For cases p and q in clause 5.6.1.1 when the UE supporting MUSIM sets the Request type to "NAS signalling connection release" or to "Rejection of paging" in the UE request type IE in the CONTROL PLANE SERVICE REQUEST message and if the UE requests restriction of paging by including the Paging restriction IE, the MME:

- if accepts the paging restriction, shall include the EPS additional request result IE in the SERVICE ACCEPT message and set the Paging restriction decision to "paging restriction is accepted". The MME shall store the paging restrictions of the UE, enforce these restrictions in the paging procedure as described in clause 5.6.2; or

- if rejects the paging restriction, shall include the EPS additional request result IE in the SERVICE ACCEPT message and set the Paging restriction decision to "paging restriction is rejected", and shall discard the received paging restriction. The MME shall delete any stored paging restriction for the UE and stop restricting paging; and

shall initiate the release of the NAS signalling connection after the completion of the service request procedure.

In NB-S1 mode, for cases a, b, c and m in clause 5.6.1.1, if the MME needs to initiate the setup of user plane radio bearer(s), the MME shall check if the UE can support the establishment of additional user plane radio bearer based on the multiple DRB support indicated by UE in the UE network capability IE.

For cases a, b and c in clause 5.6.1.1, if the EPS bearer context status IE is included in the CONTROL PLANE SERVICE REQUEST message, the network shall deactivate all those EPS bearer contexts locally (without peer-to-peer signalling between the network and the UE) which are active on the network side but are indicated by the UE as being inactive. If a default EPS bearer context is marked as inactive in the EPS bearer context status IE included in the CONTROL PLANE SERVICE REQUEST message, and this default bearer is not associated with the last PDN connection of the UE in the MME, the MME shall locally deactivate all EPS bearer contexts associated to the PDN connection with the default EPS bearer context without peer-to-peer ESM signalling to the UE. If the default bearer is associated with the last remaining PDN connection of the UE in the MME, and EMM-REGISTERED without PDN connection is supported by the UE and the MME, the MME shall locally deactivate all EPS bearer contexts associated to the PDN connection with the default EPS bearer context without peer-to-peer ESM signalling to the UE.

If the EPS bearer context status IE is included in the CONTROL PLANE SERVICE REQUEST and the MME decides to respond with a SERVICE ACCEPT message, the MME shall include an EPS bearer context status IE, indicating which EPS bearer contexts are active in the MME, except for the case when no EPS bearer context exists on the network side.

If the MME needs to initiate an EPS bearer context status synchronization, the MME may include an EPS bearer context status IE in the SERVICE ACCEPT message also if no EPS bearer context status IE was included in the CONTROL PLANE SERVICE REQUEST message.

If the MME sends a SERVICE ACCEPT message upon receipt of the CONTROL PLANE SERVICE REQUEST message piggybacked with the ESM DATA TRANSPORT message:

- if the Release assistance indication IE is set to "No further uplink and no further downlink data transmission subsequent to the uplink data transmission is expected" in the message;

- if the UE has indicated support for the control plane data back-off timer; and

- if the MME decides to activate the congestion control for transport of user data via the control plane,

then the MME shall include the T3448 value IE in the SERVICE ACCEPT message.

If the MME sends a SERVICE ACCEPT message and decides to deactivate congestion control for transport of user data via the control plane then the MME shall delete the stored control plane data back-off time for the UE and the MME shall not include timer T3448 value IE in SERVICE ACCEPT message.

For cases a, b, c and m in clause 5.6.1.1, if the EPS bearer context status IE is included in the CONTROL PLANE SERVICE REQUEST message or the MME needs to initiate an EPS bearer context status synchronization, the MME shall consider the service request procedure successfully completed when it sends the SERVICE ACCEPT message. If the EPS bearer context status IE is not included in the CONTROL PLANE SERVICE REQUEST message and the MME does not need to initiate an EPS bearer context status synchronization, the MME shall consider the service request procedure successfully completed in the following cases:

- when it successfully completes a NAS security mode control procedure;

- when it receives an indication from the lower layer that the user plane is setup, if radio bearer establishment is required;

- upon receipt of the CONTROL PLANE SERVICE REQUEST message and completion of the EMM common procedures, if any, if the CONTROL PLANE SERVICE REQUEST message was successfully integrity checked and the ESM message container or NAS message container in the CONTROL PLANE SERVICE REQUEST message, if applicable, was successfully deciphered, radio bearer establishment is not required, and the MME has downlink user data or signalling not related to an EMM common procedure pending; and

- with the transmission of a SERVICE ACCEPT message or with the decision to initiate release of the NAS signalling connection, if the CONTROL PLANE SERVICE REQUEST message was successfully integrity checked and the ESM message container or NAS message container in the CONTROL PLANE SERVICE REQUEST message, if applicable, was successfully deciphered, radio bearer establishment is not required, and the MME does not have any downlink user data or signalling pending.

If the MME considers the service request procedure successfully completed the MME shall:

1) forward the contents of the ESM message container IE, if any, to the ESM layer; and

2) forward the contents of the NAS message container IE, if any.

For cases a, b and c in clause 5.6.1.1, the UE shall treat the receipt of any of the following as successful completion of the procedure:

- a SECURITY MODE COMMAND message;

- a security protected EMM message different from a SERVICE REJECT message and not related to an EMM common procedure;

- a security protected ESM message; and

- receipt of the indication from the lower layers that the user plane radio bearers are set up.

Upon successful completion of the procedure, the UE shall reset the service request attempt counter, stop the timer T3417 and enter the state EMM-REGISTERED.

NOTE 4: The security protected EMM message can be e.g. a SERVICE ACCEPT message and the ESM message an ESM DATA TRANSPORT message.

For case m in clause 5.6.1.1, the UE shall treat the indication from the lower layers that the user plane radio bearers are set up as successful completion of the procedure. The UE shall treat the receipt of a SERVICE ACCEPT message as completion of the procedure without the establishment of the user plane radio bearers. For both cases, the UE shall reset the service request attempt counter, stop the timer T3417 and enter the state EMM-REGISTERED.

For case b in clause 5.6.1.1, the UE shall also treat the indication from the lower layers that the RRC connection has been released as successful completion of the procedure. The UE shall reset the service request attempt counter, stop the timer T3417 and enter the state EMM-REGISTERED.

For cases a, c and m in clause 5.6.1.1, the UE shall treat the indication from the lower layers that the RRC connection has been released as an abnormal case and shall follow the procedure described in clause 5.6.1.6, item b.

For cases p and q in clause 5.6.1.1, when the UE supporting MUSIM in the CONTROL PLANE SERVICE REQUEST message sets the Request type to "NAS signalling connection release" or to "Rejection of paging" in the UE request type IE, the UE shall treat the receipt of SERVICE ACCEPT message as the successful completion of the procedure and the UE shall reset the service request attempt counter, stop timer T3417, enter the state EMM-REGISTERED and not deactivate EPS bearer contexts locally.

For case o in clause 5.6.1.1, the UE shall treat the receipt of SERVICE ACCEPT message as the successful completion of the procedure. The UE shall reset the service request attempt counter, stop timer T3417 and enter the state EMM-REGISTERED.

For cases a, b and c in clause 5.6.1.1,

- if the MME needs to initiate an EPS bearer context status synchronization, the UE can receive a SERVICE ACCEPT message even after it received a SECURITY MODE COMMAND message or an indication from the lower layers that the user plane radio bearers are set up and determined successful completion of the service request procedure. Upon receipt of the SECURITY MODE COMMAND message or an indication from the lower layers that the user plane radio bearers are set up, the UE shall start timer T3449. If the UE receives a security protected ESM message or a security protected EMM message not related to an EMM common procedure, the UE shall stop the timer T3449. If the UE receives a SERVICE ACCEPT message while the timer T3449 is running, the UE shall treat the SERVICE ACCEPT message and stop the timer T3449. If the UE is not in state EMM-SERVICE-REQUEST-INITIATED and timer T3449 is not running, the receipt of the SERVICE ACCEPT message is considered as protocol error and the UE shall return EMM STATUS message as specified in clause 7.4; otherwise the UE shall treat the SERVICE ACCEPT message; and

- if the UE treats the SERVICE ACCEPT message and an EPS bearer context status IE is included in the message, the UE shall deactivate all those EPS bearers contexts locally (without peer-to-peer signalling between the UE and the MME) which are active in the UE, but are indicated by the MME as being inactive. If a default EPS bearer context is marked as inactive in the EPS bearer context status IE included in the SERVICE ACCEPT message, and this default bearer is not associated with the last remaining PDN connection in the UE, the UE shall locally deactivate all EPS bearer contexts associated to the PDN connection with the default EPS bearer context without peer-to-peer ESM signalling to the MME. If the default bearer is associated with the last remaining PDN connection of the UE in the MME, and EMM-REGISTERED without PDN connection is supported by the UE and the MME, the UE shall locally deactivate all EPS bearer contexts associated to the PDN connection with the default EPS bearer context without peer-to-peer ESM signalling to the MME.

If the T3448 value IE is present in the received SERVICE ACCEPT message, the UE shall:

- stop timer T3448 if it is running;

- consider the transport of user data via the control plane as successful; and

- start timer T3448 with the value provided in the T3448 value IE.

If the UE is using EPS services with control plane CIoT EPS optimization, the T3448 value IE is present in the SERVICE ACCEPT message and the value indicates that this timer is either zero or deactivated, the UE shall consider this case as an abnormal case and proceed as if the T3448 value IE is not present.

If the UE in EMM-IDLE mode initiated the service request procedure by sending a CONTROL PLANE SERVICE REQUEST message and the SERVICE ACCEPT message does not include the T3448 value IE and if timer T3448 is running, then the UE shall stop timer T3448.

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