```
SNN-mcc-digits = DIGIT DIGIT DIGIT ; MCC of the PLMN ID

SNN-mnc-string = %x6d.6e.63 ; "mnc" in lower case

SNN-mcc-string = %x6d.63.63 ; "mcc" in lower case

SNN-3gppnetwork-string = %x33.67.70.70.6e.65.74.77.6f.72.6b ; "3gppnetwork" in lower case

SNN-org-string = %x6f.72.67 ; "org" in lower case

SNN-NID = 11SNN-hexadecimal-digit ; NID in hexadecimal digits

SNN-hexadecimal-digit = DIGIT / %x41 / %x42 / %x43 / %x44 / %x45 / %x46
```

NOTE: SNN-service-code allows for distinguishing of ANID specified in 3GPP TS 24.302 [16] and SNN as either of SNN or ANID can be carried in the AT_KDF_INPUT attribute.

EXAMPLE 1: In case of a PLMN, if PLMN ID contains MCC = 234 and MNC = 15, SNN is 5G:mnc015.mcc234.3gppnetwork.org.

EXAMPLE 2: In case of an SNPN, if SNPN ID contains a PLMN ID of MCC = 234 and MNC = 15 and an NID of 123456ABCDEH, SNN is 5G:mnc015.mcc234.3gppnetwork.org:123456ABCDE.

10 List of system parameters

10.1 General

The description of timers in the following tables should be considered a brief summary. The precise details are found in clauses 4 to 6, which should be considered the definitive descriptions.

10.2 Timers of 5GS mobility management

Timers of 5GS mobility management are shown in table 10.2.1 and table 10.2.2.

NOTE: Timers T3324, T3346, T3245 and T3247 are defined in 3GPP TS 24.008 [12]. Timers T3444, T3445, T3447 and T3448 are defined in 3GPP TS 24.301 [15].

Table 10.2.1: Timers of 5GS mobility management – UE side

TIMER NUM.	TIMER VALUE	STATE	CAUSE OF START	NORMAL STOP	ON EXPIRY
T3502	Default 12 min. NOTE 1	5GMM-DEREGISTERED 5GMM-REGISTERED	At registration failure and the attempt counter is equal to 5	Transmission of REGISTRATION REQUEST message	Initiation of the registration procedure, if still required
T3510	15s NOTE 7 NOTE 8 In WB-N1/CE mode, 85s For access via a satellite NG-RAN cell, 27s NOTE 12	5GMM-REGISTERED-INITIATED	Transmission of REGISTRATION REQUEST message	REGISTRATION ACCEPT message received or REGISTRATION REJECT message received	Start T3511 or T3502 as specified in subclause 5.5.1.2.7 if T3510 expired during registration procedure for initial registration. Start T3511 or T3502 as specified in subclause 5.5.1.3.7 if T3510 expired during the registration procedure for mobility and periodic registration update
T3511	10s	5GMM-DEREGISTERED.ATTEMPTING-REGISTRATION 5GMM-REGISTERED.ATTEMPTING-REGISTRATION-UPDATE 5GMM-REGISTERED.NORMAL-SERVICE or 5GMM-REGISTERED.NON-ALLOWED-SERVICE	At registration failure due to lower layer failure, T3510 timeout or registration rejected with other 5GMM cause values than those treated in subclause 5.5.1.2.5 for initial registration or subclause 5.5.1.3.5 for mobility and periodic registration	Transmission of REGISTRATION REQUEST message 5GMM-CONNECTED mode entered (NOTE 5)	Retransmission of the REGISTRATION REQUEST message, if still required
T3512	Default 54 min NOTE 1 NOTE 2	5GMM-REGISTERED	In 5GMM-REGISTERED, when 5GMM-CONNECTED mode is left and if the NW does not indicate support for strictly periodic registration timer as specified in subclause 5.3.7. If the network indicates support for strictly periodic registration timer, T3512 is started after the successful completion of registration update procedure. T3512 is restarted if it expires in 5GMM-CONNECTED mode as specified in subclause 5.3.7.	When entering state 5GMM-DEREGISTERED When entering 5GMM-CONNECTED mode if the NW does not indicate support for strictly periodic registration timer as specified in subclause 5.3.7.	In 5GMM-IDLE mode, Initiation of the periodic registration procedure if the UE is not registered for emergency services. In 5GMM-CONNECTED mode, restart the timer T3512. Locally deregister if the UE is registered for emergency services

TIMER NUM.	TIMER VALUE	STATE	CAUSE OF START	NORMAL STOP	ON EXPIRY
T3516	30s NOTE 7 NOTE 8 In WB-N1/CE mode, 48s For access via a satellite NG-RAN cell, 35s NOTE 12	5GMM-REGISTERED-INITIATED 5GMM-REGISTERED 5GMM-DEREGISTERED-INITIATED 5GMM-SERVICE-REQUEST-INITIATED	RAND and RES* stored as a result of an 5G authentication challenge	SECURITY MODE COMMAND message received SERVICE REJECT message received REGISTRATION ACCEPT message received AUTHENTICATION REJECT message received AUTHENTICATION FAILURE message sent 5GMM-DEREGISTERED, 5GMM-NULL or 5GMM-IDLE mode entered	Delete the stored RAND and RES*
T3517	(a) 5s for case h) in subclause 5.6.1.1; or (b) 15s for cases other than h) in subclause 5.6.1.1 NOTE 7 NOTE 8 NOTE 10 In WB-N1/CE mode, 61s For access via a satellite NG-RAN cell, 27s NOTE 12	5GMM-SERVICE-REQUEST-INITIATED	Transmission of SERVICE REQUEST message, or CONTROL PLANE SERVICE REQUEST message	(a) Indication from the lower layers that the UE has changed to S1 mode or E-UTRA connected to 5GCN for case h) in subclause 5.6.1.1; or (b) SERVICE ACCEPT message received, or SERVICE REJECT message received for cases other than h) in subclause 5.6.1.1 see subclause 5.6.1.4.2	Abort the procedure
T3519	60s NOTE 7 NOTE 8 In WB-N1/CE mode, 90s For access via a satellite NG-RAN cell, 65s	5GMM-REGISTERED-INITIATED 5GMM-REGISTERED 5GMM-DEREGISTERED-INITIATED 5GMM-SERVICE-REQUEST-INITIATED (NOTE 6)	Transmission of IDENTITY RESPONSE message, REGISTRATION REQUEST message, or DEREGISTRATION REQUEST message with freshly generated SUCI	REGISTRATION ACCEPT message with new 5G-GUTI received CONFIGURATION UPDATE COMMAND message with new 5G-GUTI received DEREGISTRATION ACCEPT message	Delete stored SUCI

TIMER NUM.	TIMER VALUE	STATE	CAUSE OF START	NORMAL STOP	ON EXPIRY
T3520	15s NOTE 7 NOTE 8 In WB-N1/CE mode, 33s For access via a satellite NG-RAN cell, 20s NOTE 12	5GMM-REGISTERED-INITIATED 5GMM-REGISTERED 5GMM-DEREGISTERED-INITIATED 5GMM-SERVICE-REQUEST-INITIATED	Transmission of AUTHENTICATION FAILURE message with any of the 5GMM cause #20, #21, #26 or #71 Transmission of AUTHENTICATION RESPONSE message with an EAP-response message after detection of an error as described in subclause 5.4.1.2.2.4	AUTHENTICATION REQUEST message received or AUTHENTICATION REJECT message received or SECURITY MODE COMMAND message received when entering 5GMM-IDLE mode indication of transmission failure of AUTHENTICATION FAILURE message from lower layers	On first expiry during a 5G AKA based primary authentication and key agreement procedure, the UE should consider the network as false and follow item g of subclause 5.4.1.3.7, if the UE is not registered for emergency services. On first expiry during a 5G AKA based primary authentication and key agreement procedure, the UE will follow subclause 5.4.1.3.7 under "For items c, d, e and f:", if the UE is registered for emergency services. On first expiry during an EAP based primary authentication and key agreement procedure, the UE should consider the network as false and follow item e of subclause 5.4.1.2.4.5, if the UE is not registered for emergency services. On first expiry during an EAP based primary authentication and key agreement procedure, the UE will follow subclause 5.4.1.2.4.5 under "For item e:", if the UE is registered for emergency services

TIMER NUM.	TIMER VALUE	STATE	CAUSE OF START	NORMAL STOP	ON EXPIRY
T3521	15s NOTE 7 NOTE 8 In WB-N1/CE mode, 45s For access via a satellite NG-RAN cell, 27s NOTE 12	5GMM-DEREGISTERED-INITIATED	Transmission of DEREGISTRATION REQUEST message when de-registration procedure is not due to a "switch off"	DEREGISTRATION ACCEPT message received	Retransmission of DEREGISTRATION REQUEST message
T3525	Default 60s NOTE 3 NOTE 7 NOTE 8 In WB-N1/CE mode, default 120s For access via a satellite NG-RAN cell, default 72s NOTE 12	5GMM-REGISTERED.NORMAL-SERVICE or 5GMM-REGISTERED.NON-ALLOWED-SERVICE	T3517 expires and service request attempt counter is greater than or equal to 5	When entering state other than 5GMM-REGISTERED.NORMAL-SERVICE state or 5GMM-REGISTERED.NON-ALLOWED-SERVICE, or UE camped on a new PLMN other than the PLMN on which timer started, or User-plane resources established with the network	The UE may initiate service request procedure
T3540		5GMM-DEREGISTERED 5GMM-REGISTERED	REGISTRATION REJECT message or DEREGISTRATION REQUEST message received with any of the 5GMM cause #3, #6, #7, #11, #12, #13, #15, #27, #31, #36, #62, #72, #73, #74, #75, #76 or #78 SERVICE REJECT message received with any of the 5GMM cause #3, #6, #7, #11, #12, #13, #15, #27, #36, #72, #73, #74, #75, #76 or #78. REGISTRATION ACCEPT message received as described in subclause 5.3.1.3 case b) and case h) SERVICE ACCEPT message received as described in subclause 5.3.1.3 case f) AUTHENTICATION REJECT message received DEREGISTRATION ACCEPT message received as described in subclause 5.3.1.3 case k)	N1 NAS signalling connection released PDU sessions have been set up except for the case the UE has set Request type to "NAS signalling connection release" in the UE request type IE in the REGISTRATION REQUEST message as described in subclause 5.3.1.3 case b) Other use cases see subclause 5.3.1.3	Release the NAS signalling connection for the cases a), a1), b), c), d), e), f), g), h), i), j), k), l) as described in subclause 5.3.1.3

TIMER NUM.	TIMER VALUE	STATE	CAUSE OF START	NORMAL STOP	ON EXPIRY
	10s NOTE 7 (applicable to case f) in subclause 5.3.1.3) NOTE 8 In WB-N1/CE mode, 34s (applicable to case f) in subclause 5.3.1.3) NOTE 11 For access via a satellite NG-RAN cell, default 22s (applicable to case f) in subclause 5.3.1.3) NOTE 12	5GMM-REGISTERED	CONFIGURATION UPDATE COMMAND message received as described in subclause 5.3.1.3 case e) and h) SERVICE ACCEPT message received as described in subclause 5.3.1.3 case i)	N1 NAS signalling connection released Other use cases see subclause 5.3.1.3	Release the NAS signalling connection for the case e) as described in subclause 5.3.1.3 and perform a new registration procedure as described in subclause 5.5.1.3.2 Release the NAS signalling connection for the case h) and i) as described in subclause 5.3.1.3
		5GMM-DEREGISTERED 5GMM-DEREGISTERED.NORMAL-SERVICE 5GMM-REGISTERED.NON-ALLOWED-SERVICE	REGISTRATION REJECT message received with the 5GMM cause #9 or #10 SERVICE REJECT message received with the 5GMM cause #9, #10 or #28		Release the NAS signalling connection for the cases c) and d) as described in subclause 5.3.1.3 and initiation of the registration procedure as specified in subclause 5.5.1.2.2 or 5.5.1.3.2
Non-3GPP de-registration timer	Default 54 min. NOTE 1 NOTE 2 NOTE 4	All 5GMM state over non-3GPP access except 5GMM-DEREGISTERED over non-3GPP access	Entering 5GMM-IDLE mode over non-3GPP access	N1 NAS signalling connection over non-3GPP access established or when entering state 5GMM-DEREGISTERED over non-3GPP access	Implicitly de-register the UE for non-3GPP access on 1st expiry
T3526	NOTE 9	5GMM-DEREGISTERED 5GMM-REGISTERED	Rejected S-NSSAI with rejection cause "S-NSSAI not available due to maximum number of UEs reached" received.	Associated S-NSSAI in the rejected NSSAI for the maximum number of UEs reached as specified in subclause 4.6.2.2 deleted.	Remove the S-NSSAI in the rejected NSSAI for the maximum number of UEs reached associated with the T3526 timer.
T3527	15s	5GMM-REGISTERED.NORMAL-SERVICE	Transmission of RELAY KEY REQUEST message Transmission of RELAY AUTHENTICATION RESPONSE message	RELAY KEY REJECT message received or RELAY AUTHENTICATION REQUEST message received or RELAY KEY ACCEPT message received	Retransmission of RELAY KEY REQUEST message

TIMER NUM.	TIMER VALUE	STATE	CAUSE OF START	NORMAL STOP	ON EXPIRY
NOTE 1: The value of this timer is provided by the network operator during the registration procedure.					
NOTE 2: The default value of this timer is used if the network does not indicate a value in the REGISTRATION ACCEPT message and the UE does not have a stored value for this timer.					
NOTE 3: The value of this timer is UE implementation specific, with a minimum value of 60 seconds if not in NB-N1 mode and if not in WB-N1/CE mode.					
NOTE 4: If the T3346 value received in the mobility management messages is greater than the value of the non-3GPP de-registration timer, the UE sets the non-3GPP de-registration timer value to be 4 minutes greater than the value of timer T3346.					
NOTE 5: The conditions for which this applies are described in subclause 5.5.1.3.7.					
NOTE 6: The conditions for which this applies to the 5GMM-SERVICE-REQUEST-INITIATED state are described in subclause 5.4.1.3.7 case c) and case d).					
NOTE 7: In NB-N1 mode, the timer value shall be calculated as described in subclause 4.17.					
NOTE 8: In WB-N1 mode, if the UE supports CE mode B and operates in either CE mode A or CE mode B, then the timer value is as described in this table for the case of WB-N1/CE mode (see subclause 4.19).					
NOTE 9: The value of this timer is provided by the network operator during the registration procedure or the generic UE configuration update procedure along with the rejected S-NSSAI with rejection cause "S-NSSAI not available due to maximum number of UEs reached". The default value of this timer is implementation specific with a minimum value of 12 minutes and used if the network does not provide a value in the REGISTRATION ACCEPT message, the REGISTRATION REJECT message, or the CONFIGURATION UPDATE COMMAND message along with the rejected S-NSSAI with rejection cause "S-NSSAI not available due to maximum number of UEs reached".					
NOTE 10: Based on implementation, the timer may be set to a value between 250ms and 15s when the MUSIM UE indicates "NAS signalling connection release" in the UE request type IE of the SERVICE REQUEST message or CONTROL PLANE SERVICE REQUEST message.					
NOTE 11: Based on implementation, the timer may be set to a value between 250ms and 10s when the MUSIM UE not in NB-N1 mode or WB-N1 mode indicated "NAS signalling connection release" or "Rejection of paging" in the UE request type IE of the SERVICE REQUEST message or CONTROL PLANE SERVICE REQUEST message; or indicated "NAS signalling connection release" in the UE request type IE of the REGISTRATION REQUEST message.					
NOTE 12: In satellite NG-RAN access, this value shall be selected when satellite NG-RAN RAT type is NR(MEO) or NR(GEO).					

Table 10.2.2: Timers of 5GS mobility management – AMF side

TIMER NUM.	TIMER VALUE	STATE	CAUSE OF START	NORMAL STOP	ON EXPIRY
T3513 NOTE 7 NOTE 9	NOTE 4	5GMM-REGISTERED	Paging procedure initiated	Paging procedure completed as specified in subclause 5.6.2.2.1	Network dependent
T3522 NOTE 6 NOTE 8	6s In WB-N1/CE mode, 24s For access via a satellite NG-RAN cell, 11s NOTE 12	5GMM-DEREGISTERED-INITIATED	Transmission of DEREGISTRATION REQUEST message	DEREGISTRATION ACCEPT message received	Retransmission of DEREGISTRATION REQUEST message
T3550 NOTE 6 NOTE 8	6s In WB-N1/CE mode, 18s For access via a satellite NG-RAN cell, 11s NOTE 12	5GMM-COMMON-PROCEDURE-INITIATED	Transmission of REGISTRATION ACCEPT message as specified in subclause 5.5.1.2.4 and 5.5.1.3.4	REGISTRATION COMPLETE message received	Retransmission of REGISTRATION ACCEPT message
T3555 NOTE 6 NOTE 8	6s In WB-N1/CE mode, 24s For access via a satellite NG-RAN cell, 11s NOTE 12	5GMM-REGISTERED	Transmission of CONFIGURATION UPDATE COMMAND message with "acknowledgement requested" set in the Acknowledgement bit of the Configuration update indication IE	CONFIGURATION UPDATE COMPLETE message received	Retransmission of CONFIGURATION UPDATE COMMAND message
T3560 NOTE 6 NOTE 8	6s In WB-N1/CE mode, 24s For access via a satellite NG-RAN cell, 11s	5GMM-COMMON-PROCEDURE-INITIATED	Transmission of AUTHENTICATION REQUEST message Transmission of SECURITY MODE COMMAND message	AUTHENTICATION RESPONSE message received AUTHENTICATION FAILURE message received SECURITY MODE COMPLETE message received SECURITY MODE REJECT message received	Retransmission of AUTHENTICATION REQUEST message or SECURITY MODE COMMAND message

TIMER NUM.	TIMER VALUE	STATE	CAUSE OF START	NORMAL STOP	ON EXPIRY
T3565 NOTE 6 NOTE 8	6s In WB-N1/CE mode, 24s For access via a satellite NG-RAN cell, 11s NOTE 12	5GMM-REGISTERED	Transmission of NOTIFICATION message	SERVICE REQUEST message received CONTROL PLANE SERVICE REQUEST message received NOTIFICATION RESPONSE message received REGISTRATION REQUEST Message received DEREGISTRATION REQUEST message received NGAP UE context resume request message as specified in 3GPP TS 38.413 [31] received	Retransmission of NOTIFICATION message
T3570 NOTE 6 NOTE 8	6s In WB-N1/CE mode, 24s For access via a satellite NG-RAN cell, 11s NOTE 12	5GMM-COMMON-PROCEDURE-INITIATED	Transmission of IDENTITY REQUEST message	IDENTITY RESPONSE message received	Retransmission of IDENTITY REQUEST message
T3575 NOTE 6 NOTE 8	15s In WB-N1/CE mode, 60s For access via a satellite NG-RAN cell, 27s NOTE 12	5GMM-REGISTERED	Transmission of NETWORK SLICE-SPECIFIC AUTHENTICATION COMMAND message	NETWORK SLICE-SPECIFIC AUTHENTICATION COMPLETE message received	Retransmission of NETWORK SLICE-SPECIFIC AUTHENTICATION COMMAND message
Active timer	NOTE 10	All except 5GMM-DEREGISTERED	Entering 5GMM-IDLE mode after indicating MICO mode activation to the UE with an active timer value.	N1 NAS signalling connection established	Activate MICO mode for the UE.
Implicit de-registration timer	NOTE 2	All except 5GMM-DEREGISTERED	The mobile reachable timer expires while the network is in 5GMM-IDLE mode Entering 5GMM-IDLE mode over 3GPP access if the MICO mode is activated and strictly periodic monitoring timer is not running The strictly periodic monitoring timer expires while the network is in 5GMM-IDLE mode	N1 NAS signalling connection established	Implicitly de-register the UE on 1st expiry

TIMER NUM.	TIMER VALUE	STATE	CAUSE OF START	NORMAL STOP	ON EXPIRY
Mobile reachable timer	NOTE 1	All except 5GMM-DEREGISTERED	Entering 5GMM-IDLE mode	N1 NAS signalling connection established	Network dependent, but typically paging is halted on 1st expiry, and start implicit de-registration timer, if the UE is not registered for emergency services. Implicitly de-register the UE which is registered for emergency services
Non-3GPP implicit de-registration timer	NOTE 3	All except 5GMM-DEREGISTERED	Entering 5GMM-IDLE mode over non-3GPP access	N1 NAS signalling connection over non-3GPP access established	Implicitly de-register the UE for non-3GPP access on 1s expiry
Strictly periodic monitoring timer	NOTE 5	All except 5GMM-DEREGISTERED	At the successful completion of registration update procedure if strictly periodic registration timer indication is supported as specified in subclause 5.3.7.	Entering 5GMM-DEREGISTERED.	In 5GMM-IDLE mode, start implicit de-registration timer as specified in subclause 5.3.7. In 5GMM-CONNECTED mode, Strictly periodic monitoring timer is started again as specified in subclause 5.3.7.
Implementation specific timer for onboarding services	NOTE 11	5GMM-REGISTERED	At the successful completion of initial registration for onboarding services in SNPN or initial registration for the UE which the subscription is only for configuration of SNPN subscription parameters in PLMN via the user plane or successful completion of registration procedure for mobility and periodic registration update if the implementation specific timer for onboarding services is not running and: - the UE is registered for onboarding services in SNPN; or - the UE's subscription only allows for configuration of SNPN subscription parameters in PLMN via the user plane.	DEREGISTRATION REQUEST message received.	Network-initiated de-registration procedure performed

TIMER NUM.	TIMER VALUE	STATE	CAUSE OF START	NORMAL STOP	ON EXPIRY

NOTE 1: The default value of this timer is 4 minutes greater than the value of timer T3512. If the UE is registered for emergency services, the value of this timer is set equal to the value of timer T3512. If the T3346 value provided in the mobility management messages is greater than the value of the timer T3512, the AMF sets the mobile reachable timer and the implicit de-registration timer such that the sum of the timer values is greater than the value of timer T3346.
NOTE 2: The value of this timer is network dependent. If MICO is activated, the default value of this timer is 4 minutes greater than the value of timer T3512.
NOTE 3: The value of this timer is network dependent. The default value of this timer is 4 minutes greater than the non-3GPP de-registration timer. If the T3346 value provided in the mobility management messages is greater than the value of the non-3GPP de-registration timer, the AMF sets the non-3GPP implicit de-registration timer value to be 8 minutes greater than the value of timer T3346.
NOTE 4: The value of this timer is network dependent.
NOTE 5: The value of this timer is the same as the value of timer T3512.
NOTE 6: In NB-N1 mode, the timer value shall be calculated as described in subclause 4.17.
NOTE 7: In NB-N1 mode, the timer value shall be calculated by using an NAS timer value which is network dependent.
NOTE 8: In WB-N1 mode, if the UE supports CE mode B and operates in either CE mode A or CE mode B, then the timer value is as described in this table for the case of WB-N1/CE mode (see subclause 4.19).
NOTE 9: In WB-N1 mode, if the UE supports CE mode B, then the timer value shall be calculated by using an NAS timer value which value is network dependent.
NOTE 10: If the AMF includes timer T3324 in the REGISTRATION ACCEPT message and if the UE is not registered for emergency services, the value of this timer is equal to the value of timer T3324.
NOTE 11: The value of this timer needs to be large enough to allow a UE to complete the configuration of one or more entries of the "list of subscriber data" and considering that configuration of SNPN subscription parameters in PLMN via the user plane or onboarding services in SNPN involves third party entities outside of the operator's network.
NOTE 12: In satellite NG-RAN access, this value shall be selected when satellite NG-RAN RAT type is NR(MEO) or NR(GEO).

10.3 Timers of 5GS session management

Timers of 5GS session management are shown in table 10.3.1 and table 10.3.2.

NOTE: Timer T3396 is defined in 3GPP TS 24.008 [12].

Table 10.3.1: Timers of 5GS session management – UE side

TIMER NUM.	TIMER VALUE	STATE	CAUSE OF START	NORMAL STOP	ON THE 1st, 2nd, 3rd, 4th EXPIRY (NOTE 1)
T3580 NOTE 4 NOTE 5	16s In WB-N1/CE mode, 24s For access via a satellite NG-RAN cell, 21s NOTE 7	PDU SESSION ACTIVE PENDING	Transmission of PDU SESSION ESTABLISHMENT REQUEST message	PDU SESSION ESTABLISHMENT ACCEPT message received or PDU SESSION ESTABLISHMENT REJECT message received or PDU SESSION ESTABLISHMENT REQUEST message received in a DL NAS TRANSPORT message with 5GMM cause #22, #28, #65. #67, #69, #90, #91 or #92	Retransmission of PDU SESSION ESTABLISHMENT REQUEST message
T3581 NOTE 4 NOTE 5	16s In WB-N1/CE mode, 24s For access via a satellite NG-RAN cell, 21s NOTE 7	PDU SESSION MODIFICATION PENDING	Transmission of PDU SESSION MODIFICATION REQUEST message	PDU SESSION MODIFICATION COMMAND message with the same PTI is received or PDU SESSION MODIFICATION REJECT message received or PDU SESSION MODIFICATION REQUEST message received in a DL NAS TRANSPORT message with 5GMM cause #22, #28. #67, #69, or #90	Retransmission of PDU SESSION MODIFICATION REQUEST message
T3582 NOTE 4 NOTE 5	16s In WB-N1/CE mode, 24s For access via a satellite NG-RAN cell, 21s NOTE 7	PDU SESSION INACTIVE PENDING	Transmission of PDU SESSION RELEASE REQUEST message	PDU SESSION RELEASE COMMAND message with the same PTI is received or PDU SESSION RELEASE REJECT message received	Retransmission of PDU SESSION RELEASE REQUEST message
T3583	Default 1 min. NOTE 2	PDU SESSION ACTIVE	UE creates or updates a derived QoS rule	UE deletes the derived QoS rule (see subclause 6.2.5.1.4.5)	On 1st expiry: Deletion of the derived QoS rule

TIMER NUM.	TIMER VALUE	STATE	CAUSE OF START	NORMAL STOP	ON THE 1st, 2nd, 3rd, 4th EXPIRY (NOTE 1)
T3584	NOTE 3	PDU SESSION ACTIVE PENDING PDU SESSION MODIFICATION PENDING PDU SESSION ACTIVE or PDU SESSION INACTIVE PENDING	PDU SESSION ESTABLISHMENT REJECT, PDU SESSION MODIFICATION REJECT, or PDU SESSION RELEASE COMMAND received with 5GSM cause #67 and with a timer value for T3584 PDU SESSION ESTABLISHMENT REQUEST, or PDU SESSION MODIFICATION REQUEST received in a DL NAS TRANSPORT message with 5GMM cause #67 and with a timer value for T3584 (see subclause 5.4.5.3.3)	PDU SESSION RELEASE COMMAND message (see NOTE 6) or PDU SESSION MODIFICATION COMMAND message or PDU SESSION AUTHENTICATION COMMAND message or DEREGISTRATION REQUEST message with the de-registration type "re-registration required"	None
T3585	NOTE 3	PDU SESSION ACTIVE PENDING PDU SESSION MODIFICATION PENDING PDU SESSION ACTIVE or PDU SESSION INACTIVE PENDING	PDU SESSION ESTABLISHMENT REJECT, PDU SESSION MODIFICATION REJECT, or PDU SESSION RELEASE COMMAND received with 5GSM cause #69 and with a timer value for T3585 PDU SESSION ESTABLISHMENT REQUEST, or PDU SESSION MODIFICATION REQUEST received in a DL NAS TRANSPORT message with 5GMM cause #69 and with a timer value for T3585(see subclause 5.4.5.3.3)	DU SESSION RELEASE COMMAND message (see NOTE 6) or PDU SESSION MODIFICATION COMMAND message or PDU SESSION AUTHENTICATION COMMAND message or DEREGISTRATION REQUEST message with the de-registration type "re-registration required"	None
Back-off timer			defined in 3GPP TS 24.008 [12]		
T3586 NOTE 4 NOTE 5	8s In WB-N1/CE mode, 16s For access via a satellite NG-RAN cell, 13s NOTE 7	PDU SESSION ACTIVE	REMOTE UE REPORT message sent	REMOTE UE REPORT RESPONSE message received	On the 1st and 2nd expiry, retransmission of REMOTE UE REPORT message On the 3rd expiry, the procedure is aborted (see subclause 6.6.2.4).
T3587	NOTE 8	PDU SESSION ACTIVE	PDU SESSION MODIFICATION COMMAND message or PDU SESSION ESTABLISHMENT ACCEPT message received with Received MBS information that includes MBS decision set to "MBS join is rejected" and Rejection cause set to "multicast MBS session has not started or will not start soon" and an MBS back-off timer value	None	Initiating a request to join the multicast MBS session associated with the PDU session if still needed

TIMER NUM.	TIMER VALUE	STATE	CAUSE OF START	NORMAL STOP	ON THE 1st, 2nd, 3rd, 4th EXPIRY (NOTE 1)
NOTE 1: Typically, the procedures are aborted on the fifth expiry of the relevant timer. Exceptions are described in the corresponding procedure description.					
NOTE 2: The network may provide the value of this timer applicable to the derived QoS rules of a specific PDU session as RQ timer value in the PDU SESSION ESTABLISHMENT ACCEPT message and PDU SESSION MODIFICATION COMMAND message. The maximum value of the timer is 30 min. If the network indicates a value greater than the maximum value, then the UE shall use the maximum value.					
NOTE 3: The value of this timer is provided by the network.					
NOTE 4: In NB-N1 mode, then the timer value shall be calculated as described in subclause 4.18.					
NOTE 5: In WB-N1 mode, if the UE supports CE mode B and operates in either CE mode A or CE mode B, then the timer value is as described in this table for the case of WB-N1/CE mode (see subclause 4.20).					
NOTE 6: If the PDU SESSION RELEASE COMMAND message includes the Back-off timer value IE where the timer value indicates neither zero nor deactivated and the 5GSM cause is not #39, the UE then starts the timer with the value provided in the Back-off timer value IE after stopping the existing timer (see subclause 6.3.3.3).					
NOTE 7: In satellite NG-RAN access, this value shall be selected when satellite NG-RAN RAT type is NR(MEO) or NR(GEO).					
NOTE 8: The value of this timer is provided by the network in the Received MBS container IE (see subclause 6.3.2.3, subclause 6.4.1.3 and subclause 9.11.4.31).					

NOTE 1: The back-off timer is used to describe a logical model of the required UE behaviour. This model does not imply any specific implementation, e.g. as a timer of timestamp.

NOTE 2: Reference to back-off timer in this section can either refer to use of timer T3396 or to use of a different packet system specific timer within the UE. Whether the UE uses T3396 as a back-off timer or it uses different packet system specific timers as back-off timers is left up to UE implementation.

Table 10.3.2: Timers of 5GS session management – SMF side

TIMER NUM.	TIMER VALUE	STATE	CAUSE OF START	NORMAL STOP	ON THE 1st, 2nd, 3rd, 4th EXPIRY (NOTE 1)
T3590 NOTE 3 NOTE 4	15s In WB-N1/CE mode, 23s For access via a satellite NG-RAN cell, 21s NOTE 5	PROCEDURE TRANSACTION PENDING	Transmission of PDU SESSION AUTHENTICATION COMMAND message	PDU SESSION AUTHENTICATION COMPLETE message received	Retransmission of PDU SESSION AUTHENTICATION COMMAND message
T3591 NOTE 3 NOTE 4	16s In WB-N1/CE mode, 24s For access via a satellite NG-RAN cell, 22s NOTE 5	PDU SESSION MODIFICATION PENDING	Transmission of PDU SESSION MODIFICATION COMMAND message	PDU SESSION MODIFICATION COMPLETE message received or PDU SESSION MODIFICATION COMMAND REJECT message received	Retransmission of PDU SESSION MODIFICATION COMMAND message
T3592 NOTE 3 NOTE 4	16s In WB-N1/CE mode, 24s For access via a satellite NG-RAN cell, 22s NOTE 5	PDU SESSION INACTIVE PENDING	Transmission of PDU SESSION RELEASE COMMAND message	PDU SESSION RELEASE COMPLETE message received or N1 SM delivery skipped indication received	Retransmission of PDU SESSION RELEASE COMMAND message
T3593 NOTE 3 NOTE 4	Default 60s (NOTE 2)	PDU SESSION MODIFICATION PENDING	Reception of PDU SESSION MODIFICATION COMPLETE message for transmitted PDU SESSION MODIFICATION COMMAND message where the PDU SESSION MODIFICATION COMMAND message included 5GSM cause #39	PDU SESSION RELEASE REQUEST message received	Network-requested PDU session release procedure performed
T3594 NOTE 3 NOTE 4	15s In WB-N1/CE mode, 23s For access via a satellite NG-RAN cell, 21s NOTE 5	PROCEDURE TRANSACTION PENDING	Transmission of SERVICE-LEVEL AUTHENTICATION COMMAND message	SERVICE-LEVEL AUTHENTICATION COMPLETE message received	Retransmission of SERVICE-LEVEL AUTHENTICATION COMMAND message

NOTE 1: Typically, the procedures are aborted on the fifth expiry of the relevant timer. Exceptions are described in the corresponding procedure description.
NOTE 2: If the PDU Session Address Lifetime value is sent to the UE in the PDU SESSION MODIFICATION COMMAND message then timer T3593 shall be started with the same value, otherwise it shall use a default value.
NOTE 3: In NB-N1 mode, the timer value shall be calculated as described in subclause 4.18.
NOTE 4: In WB-N1 mode, if the UE supports CE mode B and operates in either CE mode A or CE mode B, then the timer value is as described in this table for the case of WB-N1/CE mode (see subclause 4.20).
NOTE 5: In satellite NG-RAN access, this value shall be selected when satellite NG-RAN RAT type is NR(MEO) or NR(GEO).

10.4 Void