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cause codes UMTS LTE 3GPP

Mobility Management Cause Codes

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MS identification:

Cause value = 2 (IMSI unknown in HLR)
This cause is sent to the MS if the MS is not known (registered) in the HLR. This cause code does not affect operation of the GPRS service, although is may be used by a GMM procedure.

Cause value = 3 (Illegal MS)
This cause is sent to the MS when the network refuses service to the MS either because an identity of the MS is not acceptable to the network or because the MS does not pass the authentication check, i.e. the SRES received from the MS is different from that generated by the network. When used by an MM procedure, except the authentication procedure, this cause does not affect operation of the GPRS service.

Cause value = 4 (IMSI unknown in VLR)
This cause is sent to the MS when the given IMSI is not known at the VLR.

Cause value = 5 (IMEI not accepted)
This cause is sent to the MS if the network does not accept emergency call establishment using an IMEI or not accept attach procedure for emergency services using an IMEI.

Cause value = 6 (Illegal ME)
This cause is sent to the MS if the ME used is not acceptable to the network, e.g. blacklisted. When used by an MM procedure, this cause does not affect operation of the GPRS service.

Subscription options:

Cause value = 11 (PLMN not allowed)
This cause is sent to the MS if it requests location updating in a PLMN where the MS, by subscription or due to operator determined barring is not allowed to operate.

Cause value = 12 (Location Area not allowed)
This cause is sent to the MS if it requests location updating in a location area where the HPLMN determines that the MS, by subscription, is not allowed to operate.
NOTE: If cause #12 is sent to a roaming subscriber the subscriber is denied service even if other PLMNs are available on which registration was possible.

Cause value = 13 (Roaming not allowed in this location area)

This cause is sent to an MS which requests location updating in a location area of a PLMN which by subscription offers roaming to that MS but not in that Location Area.

Cause value = 15 (No Suitable Cells In Location Area)

This cause is sent to the MS if it requests location updating in a location area where the MS, by subscription, is not allowed to operate, but when it should find another allowed location area in the same PLMN.

NOTE: Cause #15 and cause #12 differ in the fact that cause #12 does not trigger the MS to search for another allowed location area on the same PLMN.

Cause value = 25 (Not authorized for this CSG)

This cause is sent to the MS if it requests access in a CSG cell where the MS either has no subscription to operate or the MS's subscription has expired and it should find another cell in the same PLMN.

NOTE: The MS not supporting CSG will not receive cause# 25, as such a MS is not supposed to try to access a CSG cell.

PLMN/Congestion/Authentication:

Cause value = 20 (MAC failure)

This cause is sent to the network if the USIM detects that the MAC in the AUTHENTICATION REQUEST or AUTHENTICATION_AND_CIPHERING REQUEST message is not fresh (see 3GPP TS 33.102 [5a]).

Cause value = 21 (Synch failure)

This cause is sent to the network if the USIM detects that the SQN in the AUTHENTICATION REQUEST or AUTHENTICATION_AND_CIPHERING REQUEST message is out of range (see 3GPP TS 33.102 [5a]).

Cause value = 17 (Network failure)

This cause is sent to the MS if the MSC cannot service an MS generated request because of PLMN failures, e.g. problems in MAP.

Cause value = 22 (Congestion)

This cause is sent if the service request cannot be actioned because of congestion (e.g. no channel, facility busy/congested etc.).

Cause value = 23 (GSM authentication unacceptable)

This cause is sent to the network in Iu mode if a USIM is inserted in the MS and there is no Authentication Parameter AUTN IE present in the AUTHENTICATION REQUEST or AUTHENTICATION_AND_CIPHERING REQUEST message.

Cause value = 32 (Service option not supported)

This cause is sent when the MS requests a service/facility in the CM SERVICE REQUEST message which is not supported by the PLMN.

Cause value = 33 (Requested service option not subscribed)

This cause is sent when the MS requests a service option for which it has no subscription.

Cause value = 34 (Service option temporarily out of order)

This cause is sent when the MSC cannot service the request because of temporary outage of one or more functions required for supporting the service.

Cause value = 38 (Call cannot be identified)

This cause is sent when the network cannot identify the call associated with a call re-establishment request.

Causes related to invalid messages

Cause value = 95 (Semantically incorrect message)

See annex H, subclause H.5.10.

Cause value = 96 (Invalid mandatory information)

See annex H, subclause H.6.1.

Cause value = 97 (Message type non-existent or not implemented)

See annex H, subclause H.6.2.

Cause value = 98 (Message not compatible with protocol state)

See annex H, subclause H.6.3.

Cause value = 99 (Information element non-existent or not implemented)

See annex H, subclause H.6.4.

Cause value = 100 (Conditional IE error)

See annex H, subclause H.6.5.

Cause value = 101 (Message not compatible with protocol state)

See annex H, subclause H.6.6.

Cause value = 111 (Protocol error, unspecified)

See annex H, subclause H.6.8.

Cause Codes for GMM:

Cause value = 7 (GPRS services not allowed)

This cause is sent to the MS when it is not allowed to operate GPRS services.

Cause value = 8 (GPRS services and non-GPRS services not allowed)

This cause is sent to the MS when it is not allowed to operate either GPRS or non-GPRS services.

Cause value = 9 (MS identity cannot be derived by the network)

This cause is sent to the MS when the network cannot derive the MS's identity from the P-TMSI in case of inter-SGSN routing area update.