

Information Note

Q.850 clear-down cause codes



When calls clear in SIP, H.323 and ISDN a “Clear-down Cause Code” is provided to indicate the reason why the call cleared down. The specification which defines the values and meanings of the Clear-down Cause Codes is the ITU (International Telecommunication Union) specification Q.850.

Clear-down cause codes

The table below reproduces the Q.850 clear-down cause code list plus annotates it with additional details about when you might see specific cause codes in a VegaStream gateway.

Emboldened entries are the more commonly used cause codes.

Cause Code	Description	Usual Situation
1	Unassigned number	Number dialled does not exist
2	No route to specified transit network (national use)	Either transit network does not exist or will not service request from this Vega endpoint
3	No route to destination	Number dialled cannot be forwarded to the destination - including VoIP destination unreachable (e.g. LAN network down or endpoint switched off) - check that an IP address has been defined for the VoIP call in the dial plan, or that a valid gatekeeper / SIP proxy address is specified in the Vega config.
4	Send special information tone	Called party cannot be reached "for reasons that are of a long term nature"
5	Misdialled trunk prefix (national use)	The called party number erroneously includes a trunk prefix - this number should be stripped from the dialled number being sent to the network by the customer premises equipment.
6	Channel unacceptable	The channel most recently identified is not acceptable to the sending entity for use in this call
7	call awarded, being delivered in an established channel	The user has been awarded the incoming call, and that the incoming call is being connected to a channel already established to that user for similar calls (e.g. packet-mode x.25 virtual calls).
8	pre-emption	The call is being pre-empted
9	pre-emption - circuit reserved for reuse	The call is being pre-empted and the circuit is reserved for reuse by the pre-empting exchange.
16	Normal call clearing	User has terminated the call normally
17	User busy	User line is engaged/busy
18	No user responding	User is not answering the phone
19	no answer from user (user alerted)	the called party has been alerted but does not respond with a connect indication within a prescribed period of time. Note - This cause is not necessarily generated by Q.931 procedures but may be generated by internal network timers.
20	subscriber absent	a mobile station has logged off, radio contact is not obtained with a mobile station or a personal telecommunication user is temporarily not addressable at any user-network interface.
21	Call rejected	User has seen the call and subsequently rejected it - e.g. far end SIP gateway is configured not to "accept non-proxy invites" and call is direct and not via the proxy.
22	number changed	The called party number indicated by the calling party is no longer assigned, The new called party number may optionally be included in the diagnostic field. If a network does not support this cause, cause no: 1, unallocated (unassigned) number shall be used.

26	non-selected user clearing	The user has not been awarded the incoming call.
27	Destination out of order	Outgoing ISDN link is inactive No (or less than 5v) voltage detected on FXO port when trying to make an outbound FXO call
28	Invalid (incomplete) number format	An unknown numbering format has been used
29	facilities rejected	a supplementary service requested by the user cannot be provide by the network.
30	response to STATUS INQUIRY	This cause is included in the STATUS message when the reason for generating the STATUS message was the prior receipt of a STATUS INQUIRY.
31	normal, unspecified	A normal event clear – only used when no other cause in the normal class applies.
34	No circuit/channel available	No resource available to progress the call; e.g. <ul style="list-style-type: none"> - PSTN / ISDN network announcement “we are sorry, all circuits are busy now, please try your call later”. - calls blocked on the Vega - no bandwidth on the LAN - Vega max calls license limit exceeded (outgoing call)
35	Call queued	
38	Network out of order	Temporary network out of order condition - immediately re-attempting the call is not likely to be successful. e.g. <ul style="list-style-type: none"> - ISDN: trying to make a call to a Vega DSL which is in the “link down” state - H.323: gatekeeper unreachable - LAN: is LAN link down? - LAN: check that there is a TA: in the dest dial plan - LAN: Default_proxy is unreachable and TA: is unreachable, e.g. because IP address is 0.0.0.0 or it / they are defined by a DNS name which the Vega cannot resolve (- check that lan.dns is configured). - LAN: on Vega 400, check that calls are directed to a LAN port that is currently active (check LAN profile) - SIP: if _advanced.sip.invite.registered=1, then is the relevant user registered?
39	permanent frame mode connection out-of-service	This cause is included in a STATUS message to indicate that a permanently established frame mode connection is out-of-service (e.g. due to equipment or section failure)
40	permanent frame mode connection operational	This cause is included in a STATUS message to indicate that a permanently established frame mode connection is operational

		and capable of carrying user information.
41	Temporary failure	The network is not functioning correctly, but the condition is not likely to last a long period of time; e.g. the user may wish to try another call attempt almost immediately. - including call rejection from the gatekeeper "Adaptive Busy", meaning LAN congestion.
42	switching equipment congestion	The switching equipment generating this cause is experiencing a period of high traffic. - or Vega max calls license limit exceeded (on incoming call)
43	access information discarded	The network could not deliver access information to the remote user as requested, i.e. user-to-user information, low layer compatibility, high layer compatibility or sub-address as indicated in the diagnostic.
44	Requested circuit/channel not available	Either the requested channel is in use or is not valid; this could be a protocol/compatibility error (e.g. unacceptable bearer capability) - Check that port is enabled - If the Vega is connected to a partial T1 or partial E1, ensure that it has its 'last_chan' configured correctly to the maximum number of channels on that trunk
46	precedence call blocked	There are no pre-emptable circuits or the called user is busy with a call of equal or higher pre-emptable level.
47	resource unavailable, unspecified	Resource unavailable - only used when no other cause in the resource unavailable class applies.
49	Quality of Service not available	The requested Quality of Service cannot be provided
50	requested facility not subscribed	The user has requested a supplementary service which is implemented by the equipment which generated this cause, but the user is not authorised to use it.
52	outgoing calls barred	
53	outgoing calls barred within CUG	Although the calling party is a member of the CUG for the outgoing CUG call, outgoing calls are not allowed for this member of the CUG.
54	incoming calls barred	
55	incoming calls barred within CUG	Although the calling party is a member of the CUG for the incoming CUG call, incoming calls are not allowed for this member of the CUG.
57	bearer capability not authorised	The user has requested a bearer capability which is implemented by the equipment which generated this cause but the user is not authorised to use.

58	bearer capability not presently available	The user has requested a bearer capability which is implemented by the equipment which generated this cause but which is not available at this time.
62	inconsistency in outgoing information element	There is an inconsistency in the designated outgoing access information and subscriber class
63	service or option not available, unspecified	a service or option is not available - no other cause in the service or option not available class applies.
65	bearer capability not implemented	The equipment sending this cause does not support the bearer capability requested
66	channel type not implemented	the equipment sending this cause does not support the channel type requested
69	requested facility not implemented	The equipment sending this cause does not support the requested supplementary services.
70	only restricted digital information bearer capability is available (national use)	The calling party has requested an unrestricted bearer service but the equipment sending this cause only supports the restricted version of the requested bearer capability.
79	service or option not implemented, unspecified	A service or option is not implemented – only used when no other cause in the service or option not implemented class applies. e.g. - In SIP the Vega receives a request for an 'unknown content type' – sip monitor on may show the SIP message '415 Unknown Content Type'
81	invalid call reference value	The equipment sending this cause has received a message with a call reference which is not currently in use on the user-network interface.
82	identified channel does not exist	The equipment sending this cause has received a request to use a channel not activated on the interface for a call.
83	a suspended call exists, but this call identify does not	A call resume has been attempted with a call identity which differs from that in use for any presently suspended call(s).
84	call identity in use	The network has received a call suspended request containing a call identity (including the null call identity) which is already in use for a suspended call within the domain of interfaces over which the call might be resumed.
85	no call suspended	The network has received a call resume request containing a Call identity information element which presently does not indicate any suspended call within the domain of interfaces over which calls may be resumed.
86	call having the requested call identity has been cleared	The network has received a call resume request containing a Call identity information element indicating a suspended call that has in the meantime been cleared while suspended (either by network time-out or by the remote user).
87	user not a member of CUG	The called user for the incoming CUG call is not a member of the specified CUG or the calling user is an ordinary subscriber

		calling a CUG subscriber.
88	Incompatible destination	The destination does not have the capability to accept the call - e.g. a voice call into a data-only terminal adaptor - VoIP: check for a CODEC mismatch - ISDN: check the layer 1 codec, ensure that the setting G711Alaw64k or G711ulaw64k matches the link to which the Vega is attached
90	non-existent CUG	The specified CUG (Closed User Group) does not exist.
91	invalid transit network selection (national use)	An incorrectly formatted transit network identification was received
95	invalid message, unspecified	An invalid message - only used when no other cause in the invalid message class applies.
96	mandatory information element is missing	The equipment sending this cause has received a message which is missing an information element which must be present in the message before that message can be processed.
97	message type non-existent or not implemented	The equipment sending this cause has received a message with a message type it does not recognise either because this is a message not defined or it is defined but not implemented by the equipment sending this cause.
98	message not compatible with call state or message type non-existent or not implemented	The equipment sending this cause has received a message such that the procedures do not indicate that this is a permissible message to receive while in the call state, or a STATUS message was received indicating an incompatible call state.
99	Information element / parameter non-existent or not implemented	The equipment sending this cause has received a message which includes information element(s)/parameter(s) not recognised because the information element(s)/parameter name(s) are not defined or are defined but not implemented by the equipment sending the cause. This cause indicates that the information element(s)/parameter(s) were discarded. However, the information element is not required to be present in the message in order for the equipment sending the cause to process the message.
100	Invalid information element contents	The equipment sending this cause has received an information element which it has implemented; however, one or more fields in the I.E. are coded in such a way which has not been implemented by the equipment sending this cause. e.g. - ISDN: check the layer 1 codec, ensure that the setting G711Alaw64k or G711ulaw64k matches the link to which the Vega is attached
101	Message not compatible with call state	A message has been received which is incompatible with the call state.
102	Recovery on timer expiry	A procedure has been initiated by the expiration of a timer in association with error handling procedures.
103	parameter non-existent or not implemented - passed on (national use)	The equipment sending this cause has received a message which includes parameters not recognised because the parameters are not defined or are defined but not implemented by the equipment sending this cause. The cause indicates that the parameter(s) were ignored. In addition, if the equipment sending this cause is an intermediate point, then this cause indicates that the parameter(s) were passed unchanged.
110	message with unrecognised parameter discarded	This cause indicates that the equipment sending this cause has discarded a received message which includes a parameter that is

		not recognised.
111	protocol error, unspecified	A protocol error - only used when no other cause in the protocol error class applies.
127	Interworking, unspecified	An interworking call (usually a call to SW56 service) has ended.

Contact Details

Email: support@vegastream.com

Web: www.vegastream.com

www.vegaassist.com

EMEA Office

VegaStream Limited
The Western Centre
Western Road
Bracknell
Berks RG12 1RW
UK

+44 (0) 1344 784900

USA Office

VegaStream Inc.
6200 Stoneridge Mall Road
3rd Floor
Pleasanton
California 94588
USA

+1 925 399 6428