

# Voice Router Internal Call Disconnect Cause Code Table

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## Introduction

This document describes well known Q.850 Cause Code values. Each Session Initiation Protocol (SIP) and H.323 standard cause code accurately reflects the nature of the associated internal failure. This capability makes the H.323 and SIP call control protocols consistent with cause codes that are generated for common problems. For each of the failures listed below, the Standard Category is associated with a Standard Category Description, the Q.850 Cause Code Value, and a description of this value.

## Prerequisites

## Requirements

Cisco recommends that you have knowledge of these topics:

- There are no formal requirements for when you read this document. However, knowledge on SIP and H.323 is preferred.

## Components Used

This document is not restricted to specific software and hardware versions.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is in production, ensure that you understand the potential impact of any command.

## Internal Cause Code Table

Standard Category	Standard Category Description	Q.850 Cause Code	Q.850 Release Cause Description
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Code

Unallocated (unassigned) number	The typical scenarios include the number is not in the routing table, or it has no path across the ISDN network.	1	Indicates that the destination requested by the calling party cannot be reached because the number is unassigned.
No route to specified transit network (national use)	<p>Typical scenarios include:</p> <ul style="list-style-type: none"> <li>• The wrong transit network code was dialed</li> <li>• The transit network does not serve this equipment</li> <li>• The transit network does not exist</li> </ul>	2	Indicates that the gateway is asked to route the call through an unrecognized intermediate network.
Destination address resolution failure	<p>Typical scenarios include:</p> <ul style="list-style-type: none"> <li>• Domain Name System (DNS)</li> <li>• Invalid session target in configuration</li> </ul>	3	CC_CAUSE_NO_ROUTE Indicates that the called party cannot be reached because the network that the call has been routed through does not serve the desired destination.
Send special information tone	The typical scenario includes the dialed number has a special condition applied to it.	4	Indicates that the called party cannot be reached for reasons that are of a long-term nature and that the special information tone must be returned to the calling party.
Misdialed trunk prefix (national use)	The typical scenario includes the wrong trunk prefix was dialed.	5	Indicates the erroneous inclusion of a trunk prefix in a called party number.
Channel Unacceptable Call	The typical scenario is failed channel on the network.	6	Indicates that the channel most recently identified is not acceptable to the sending entity for use in this call.
awarded and is delivered in an established channel	The typical scenario is a successful call.	7	Indicates that the called party has been awarded the incoming call and that the incoming call is being connected to a channel already established to that called party for similar calls.
Preemption	The typical scenario is for emergency services.	8	Indicates the call is pre-empted.
Preemption. Circuit reserved for reuse	The typical scenario is for emergency services.	9	Indicates the call is pre-empted and the circuit is reserved for reuse by pre-empting exchange.
Normal call clearing	The typical scenario is a call participant hung up.	16	Indicates that the call was cleared because one of the parties involved with the call has requested that the call be cleared. Indicates that the called party is unable to accept an incoming call because the user busy condition has been encountered. This cause value can be generated by the called party or by the network. In the case of the called party determined user busy, it is noted that the called party equipment is compatible with the call.
User busy	The typical scenario is the user is already on the telephone.	17	
No user	The typical scenario is the user did not answer.	18	Used when the called party does not respond to a call.

responding not answer the telephone.

No answer  
from the  
user (user  
alerted)

The typical scenario is the user did not answer the telephone.

19

Subscriber  
Absent

The typical scenario is the user lost network connectivity or is out of range.

20

Call  
Rejected

The typical scenario is the subscriber has a service constraint that does not accept this call.

21

Number  
Changed

The typical scenario is a subscriber has changed their number.

22

Redirection  
to a new  
destination

The typical scenario is the call is forwarded.

23

Exchange  
routing  
error

The typical scenario is the network is overloaded.

25

Nonselecte  
d user  
clearing

The typical scenario is a called number failure.

26

Typical scenarios include:

- Transmission Control Protocol (TCP) socket connection failure
- Problem sending an H.323 SETUP
- Problem sending a Session Initiation Protocol (SIP) INVITE
- Send or receive error occurs on the connected socket

Socket  
failure

27

Invalid  
number  
format

The typical scenario is the caller is calling using a network type number (enterprise) rather instead of Unknown or National.

28

Facility  
rejected  
Response

The typical scenario is a network service is not functioning.  
The typical scenarios is a STATUS

29

30

establishment message with either an alerting or connect indication within the time allotted. The number that was dialed has an active D-channel, but the far end chooses not to answer.

Used when the called party has been alerted but does not respond with a connect indication within the time allotted. This cause is not generated by Q.931 procedures but can be generated by internal network timers.

Used when a mobile station has logged off, radio communication is not obtained with a mobile station, or if a personal telecommunication party is temporarily not addressable on any network interface.

Indicates that the equipment that sent this cause code does not wish to accept this call, although it could have accepted the call because the equipment that sent this cause is neither busy nor incompatible.

Might also be generated by the network which indicates that the call was cleared because of a supplementary service constraint. The diagnostic field might contain additional information about the supplementary service and reason for rejection.

Returned to a calling party when the called number indicated by the calling party is no longer assigned. The new called party number might be optionally included in this diagnostic field.

Used by a general ISUP protocol mechanism that determines that the call must be sent to a different called number.

Indicates that the destination indicated by the calling party cannot be reached because an intermediate exchange has released the call because it reached a limit in executing the hop counter procedure.

Indicates that the called number has not been awarded the incoming call.

**CC\_CAUSE\_DESTINATION\_OUT\_OF\_ORDER**

Indicates that the destination indicated by the original call cannot be reached because the destination's interface is not functioning correctly.

The signaling message cannot be delivered to the receiving party.

Indicates that the called party cannot be reached because the called party number is not in a valid format or is not complete.

Indicates that a supplementary service requested by the originator cannot be provided by the network.

Included in the STATUS message when the reason for

to STATUS ENQUIRY	message is returned.		STATUS message was the prior receipt of a STATUS ENQUIRY message.
Normal, Unspecified	Typical scenarios is normal Operation.	31	Reports a normal event only when no other cause in normal class applies.
No circuit/channel available	The typical scenario is no B-channels are available to make the selected call.	34	Indicates that there is no appropriate circuit or channel presently available to handle the call.
Network out of order	The typical scenario is network failure.	38	Indicates that the network is not functioning correctly that the condition is likely to last for an extended period.
Permanent frame mode connection is out of service	The typical scenario is equipment or section failure.	39	Included in a STATUS message to indicate that a permanently established frame mode connection is out of service.
Permanent frame mode connection is operational	The typical scenario is normal operation.	40	Included in a STATUS message to indicate that a permanently established frame mode connection is operational and capable of carrying call information.
Temporary failure	The typical scenario is network failure.	41	Indicates that the network is not functioning correctly that the condition is likely to be resolved quickly.
Switching equipment congestion	The typical scenario is high traffic	42	Indicates that the switching equipment generating this cause is experiencing high traffic.
Access information discarded	The typical scenario is usually reported when the far-end ISDN switch removes some piece of information before tandem-switching a call.	43	Indicates that the network could not deliver access information to the called party as requested.
Requested circuit/channel not available	The typical scenario occurs during glare condition when both sides are selected top-down or bottom-up. Change the Allocation Direction so that one end is top-down and the other is bottom-up.	44	Returned when the circuit or channel indicated by the requested entity cannot be provided by the other side of the interface.
Precedence call blocked	The typical scenario is a caller is busy and the priority level of active call is equal or higher than the incoming call.	46	Indicates that there are no pre-emptable circuits or that the called party is busy with a call of equal or higher pre-emptable level.
Internal resource allocation failure	Typical scenarios include: <ul style="list-style-type: none"> <li>• Out of memory</li> <li>• Internal access to the TCP socket is unavailable</li> </ul>	47	CC_CAUSE_NO_RESOURCE Indicates a "resource unavailable" event.
QoS Error	The typical scenario is Quality of Service (QoS) error.	49	CC_CAUSE_QOS_UNAVAILABLE Indicates that the requested QoS cannot be provided.
Requested facility not subscribed	The typical scenario is the caller is trying to use a service that is not permitted.	50	Indicates that the party has requested a supplementary service that it is not authorized to use.

Outgoing calls barred within Closed User Group (CUG) Incoming calls barred within Closed User Group (CUG)	The typical scenario is a subscriber configuration contains this limitation.	53	Indicates that although the calling party is a member CUG for the outgoing CUG call, outgoing calls are not allowed for this member of the CUG.
Bearer capability not authorized	The typical scenario is the caller is not authorized to use the bearer capability.	57	Indicates that the party has requested a bearer capability which is implemented on the equipment but is not authorized to use.
Bearer capability not presently available Inconsistency in designated outgoing access information and subscriber class	The typical scenario is a call is placed with a bearer capacity that the service provider does not have the capacity to supply.	58	Indicates that the party has requested a bearer capability which is implemented by the equipment and is currently unavailable.
Service or option not available, unspecified	The typical scenario is network error.	62	Indicates that there is an inconsistency in the designated outgoing access information and subscriber class.
Media Negotiation Failure	The typical scenario is the service not available.	63	Reports a service or option not available event only with no other cause in the service or option not available code applies.
Channel type not implemented Requested facility not implemented Only	Typical scenarios include: <ul style="list-style-type: none"> <li>No codec match occurred.</li> <li>H323 or H245 problem leading to failure in media negotiation.</li> </ul> The typical scenario is channel type match not found.	65	CC_CAUSE_BEARER_CAPABILITY_NOT_IMPLEMENTED Indicates that the equipment that sent this cause does not support the bearer capability requested.
	The typical scenario is service type match not found.	66	Indicates that the equipment that sent this cause does not support the channel type requested.
	The typical scenario is a routing	69	Indicates that the equipment that sent this cause does not support the requested supplementary service.
		70	Indicates that the calling party has requested an

restricted digital information bearer capability is available (National use) Service or option not implemented, unspecified	error.		unrestricted bearer service but that the equipment that sent this cause only supports the restricted version of requested bearer capacity.
Invalid call reference value	The typical scenario is the far-end switch did not recognize the call reference for a message sent by the gateway.	79	Reports a service or option not implemented event or when no other cause in the service or option not implemented class applies.
Identified channel does not exist	The typical scenario is a fractional PRI error.	81	Indicates that the equipment that sent the cause has received a message with a call reference which is not currently in use on the user-network interface.
A suspended call exists, but this call identity does not	The typical scenario is a call ID mismatch	82	Indicates a call was attempted on a channel that is not configured.
Call identity in use	The typical scenario is equipment error.	83	Indicates a call resume has been attempted with a call identity which differs from that in use for any presently suspended calls.
No call suspended	The typical scenario is equipment error.	84	Indicates that the network has received a call suspension request that contains a call identity which is already in use for a suspended call.
Call having the requested call identity has been cleared	Typical scenarios include: <ul style="list-style-type: none"> <li>• Network timeout</li> <li>• Call cleared by remote user</li> <li>• SIP UAC sends request to UAS with no response</li> </ul>	85	Indicates that the network has received a call resume request that contains a call identity information element which does not indicate any suspended call.
User is not a member of Closed User Group (CUG)	The typical scenario is the caller is not authorized.	86	Indicates that the network has received a call identity information element that indicates a suspended call that has in the meantime been cleared while suspended.
Incompatible destination	Typical scenarios include: <ul style="list-style-type: none"> <li>• Number dialed is not capable of this type of call.</li> <li>• Caller is calling a restricted line in unrestricted mode.</li> <li>• Caller is calling a POTS phone using unrestricted mode.</li> </ul>	87	Indicates that the called user for the incoming CUG call is not a member of the specified CUG.
Nonexistent	The typical scenario is a	88	Indicates that the equipment that sent this cause has received a request to establish a call which has compatibility attributes which cannot be accommodated.
		90	Indicates that the specified CUG does not exist.

t Closed User Group (CUG) Invalid transit network selection (National use) Invalid message received error	configuration or dialing error.		
Mandatory IE missing error	<p>Typical scenarios include:</p> <ul style="list-style-type: none"> <li>• Network error.</li> <li>• Identification mismatch</li> </ul>	91	Indicates that a transit network identification was received which is of an incorrect format.
Message type nonexistent or not implemented	The typical scenario is a message type information is missing.	95	CC_CAUSE_INVALID_MESSAGE Indicates an invalid message event.
Message not compatible with call state or message type nonexistent or not implemented	<p>Typical scenarios include:</p> <ul style="list-style-type: none"> <li>• Mandatory Contact field missing in SIP message.</li> <li>• Session Description Protocol (SDP) body is missing.</li> </ul>	96	CC_CAUSE_MANDATORY_IE_MISSING Indicates that the equipment that sent this cause code received a message that is missing an information element (IE). This IE must be present in the message before the message can be processed.
An information element or parameter does not exist or is not implemented	<p>Typical scenarios include:</p> <ul style="list-style-type: none"> <li>• ISDN protocol mismatch</li> <li>• ISDN state machine violation</li> </ul>	97	Indicates that the equipment that sent this cause code received a message which is missing an information element that must be present in the message before message can be processed.
Invalid IE contents error	The typical scenario is an element mismatch.	98	Indicates that the equipment that sent this cause code received a message such that the procedures do not indicate that this is a permissible message to receive in this call state.
Message in invalid	The typical scenario is a SIP Contact field is present, but format is bad.	99	Indicates that the equipment that sent this cause code received a message which includes information element or parameters not recognized because the information element or parameter names are not defined or are defined but not implemented by the equipment.
		100	CC_CAUSE_INVALID_IE_CONTENTS Indicates that the equipment that sent this cause code received an IE that it has implemented. However, the equipment that sent this cause code has not implemented one or more of the specific fields.
	The typical scenario is an unexpected message was received	101	CC_CAUSE_MESSAGE_IN_INCOMP_CALL_STAT

call state	that is incompatible with the call state Typical scenarios include:		Indicates that a message has been received that is incompatible with the call state.
Call setup timeout failure	<ul style="list-style-type: none"> <li>• No H.323 call proceeding</li> <li>• No H.323 alerting or connect message received from the terminating gateway</li> <li>• SIP Invite expires timer reached maximum number of retries allowed</li> </ul>	102	CC_CAUSE_RECOVERY_ON_TIMER_EXPIRY Indicates that a procedure has been initiated by the expiration of a timer in association with error handling procedures.
Parameter nonexistent or not implemented passed on (National use)	The typical scenario is a configuration mismatch.	103	Indicates that the equipment that sent this cause has received a message which includes parameters not recognized because the parameters are not defined but not implemented on the equipment.
Message with unrecognized parameter discarded	The typical scenario is an unrecognized parameter.	110	Indicates that the equipment that sent this cause has discarded a received message which includes a parameter that is not recognized.
Protocol error, unspecified	The typical scenario is a protocol error.	111	Reports a protocol error event only when no other cause in the protocol error class applies.
Internal error	The typical scenario is a device failed to send a message to Public Switched Telephone Network (PSTN)	127	CC_CAUSE_INTERWORKING Indicates that there has been interworking with a network that does not provide causes for actions it takes. Exact cause cannot be ascertained.