



APPENDIX **H**

Session Initiation Protocol Cause Code Mapping

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A cause code identifies why a call is released. A Session Initiation Protocol (SIP) call can fail due to an internal failure event rather than in response to an event received from the telephone side. This is analogous to the IP Leg (H.323) Call Clearing section.

The following error codes are generated when the call is released by the SIP interface:

- 127 - Interworking, unspecified
 - Acknowledgment not received on final or reliable provisional response to a SIP 'Invite' or 'Re-Invite' sent.
 - When the Session Description Protocol (SDP) is not received in a SIP 'Ack' request and is expected.
 - When 200 class response to an initial 'Invite' is sent or received and SDP is expected but not available.
- 41 - Temporary failure
 - Request timeout on initial SIP 'Invite' sent.
 - Failure to interpret an ISUP attachment from a received SIP-T provisionable response.
- 102 - Recovery of timer expiry
 - Final response timeout when not sending a final response to an initial SIP 'Invite' within acceptable duration.
 - No response to a 'Re-Invite' or 'Update' request sent during an active call.

Table H-1 maps standard cause codes to SIP response codes.

Table H-1 **Standard Cause Codes Mapped to SIP Response Codes**

Standard Cause Code	Description	SIP Response Code	Description
1	Unallocated Number	404	Not Found
2	No Route To Network	404	Not Found
3	No Route To Destination	404	Not Found
4	Vacant Code (ANSI)	404	Not Found
5	Misdialed Trunk Prefix (ANSI)	404	Not Found
8	0 Prefix Dialed But Not Allowed (ANSI)	488	Not Acceptable Here

Table H-1 Standard Cause Codes Mapped to SIP Response Codes (continued)

Standard Cause Code	Description	SIP Response Code	Description
9	1 Prefix Dialed But Not Allowed (ANSI)	488	Not Acceptable Here
10	1 Prefix Absent	488	Not Acceptable Here
16	Normal Clearing		
17	User Busy	486	Busy Here
18	No User Responding	408	Request Timeout
19	No Answer From the User	480	Temporarily Unavailable
20	Subscriber Absent	480	Temporarily Unavailable
21	Call Rejected	403	Forbidden
		603	Decline
22	Number Changed	410	Gone
22	Number Changed	301	Moved Permanently (Contact has number from diagnostic)
23	Redirection to New Destination	410	Gone
26	Nonselected User Clearing or Misrouted Ported Number	404	Not Found
27	Destination Out of Order	502	Bad Gateway
28	Address Incomplete	484	Address Incomplete
29	Facility Rejected	501	Not Implemented
31	Normal Unspecified	480	Temporarily Unavailable
34	No Circuit Available	503	Service Unavailable
38	Network Out of Order	503	Service Unavailable
41	Temporary Failure	503	Service Unavailable
42	Switching Equipment Congestion	503	Service Unavailable
44	Requested Circuit Not Available	503	Service Unavailable
47	Resource Unavailable	503	Service Unavailable
55	Incoming Calls Barred with CUG	403	Forbidden
57	Bearer Capability Not Authorized	403	Forbidden
58	Bearer Capability Not Presently Available	503	Service Unavailable
63	Service/Option Not Available	503	Service Unavailable
65	Bearer Capability Not Implemented	488	Not Acceptable Here
69	Requested Facility Not Implemented	606	Not Acceptable
70	Only Restricted Digit Available	488	Not Acceptable Here
79	Service or Option Not Implemented	501	Not Implemented

Table H-1 Standard Cause Codes Mapped to SIP Response Codes (continued)

Standard Cause Code	Description	SIP Response Code	Description
87	User Not a Member of CUG	403	Forbidden
88	Incompatible Destination	503	Service Unavailable
95	Invalid Message	503	Service Unavailable
102	Recovery On Timer Expiry	504	Gateway Timeout
111	Protocol error	500	Server Internal Error
127	Interworking Unspecified	500	Server Internal Error
All Other Cause Codes		500	Server Internal Error

Table H-2 maps SIP response codes to standard cause codes.

Table H-2 SIP Response Code to Standard Cause Code Mapping

SIP Response Code	Description	Standard Cause Code	Description
400	Bad Request	41	Temporary Failure
401	Unauthorized	21	Call Rejected
402	Payment Required	21	Call Rejected
403	Forbidden	21	Call Rejected
404	Not Found	1	Unallocated Number
405	Method Not Allowed	63	Service or Option Unavailable
406	Not Acceptable	79	Service/Option Not Implemented
407	Proxy Authentication Required	21	Call Rejected
408	Request Timeout	102	Recovery On Timer Expiry
409	Conflict		
410	Gone	22	Number Changed (no diagnostic)
411	Length Required		
413	Request Entry Too Long	127	Interworking Unspecified
414	Request URI Too Long	127	Interworking Unspecified
415	Unsupported Media Type	79	Service/Option Not Implemented
416	Unsupported URI Scheme	127	Interworking Unspecified
420	Bad Extension	127	Interworking Unspecified
421	Extension Required	127	Interworking Unspecified
423	Interval Too Brief	127	Interworking Unspecified
480	Temporarily Unavailable	18	User Not Responding
481	Call Transaction Does Not Exist	41	Temporary Failure
482	Loop Detected	25	Exchange Routing Error
483	Too Many Hops	25	Exchange Routing Error
484	Address Incomplete	28	Invalid Number Format

Table H-2 *SIP Response Code to Standard Cause Code Mapping (continued)*

SIP Response Code	Description	Standard Cause Code	Description
485	Ambiguous	1	Unallocated Number
486	Busy Here	17	Busy Here
487	Request Terminated		
488	Not Acceptable		
500	Server Internal Error	41	Temporary Failure
501	Not Implemented	79	Service/Option Not Implemented
502	Bad Gateway	38	Network Out of Order
503	Service Unavailable	41	Temporary Failure
504	Server Timeout	102	Recovery On Timer Expiry
505	Version Not Supported	127	Interworking Unspecified
513	Message Too Long	127	Interworking Unspecified
600	Busy Everywhere	17	Busy Here
603	Decline	21	Decline
604	Does Not Exist Anywhere	1	Unallocated Number
606	Not Acceptable		
Any Other Status Code		31	Normal Unspecified