



Cisco EGW 2200 Reason Code Translations

The Cisco EGW Administration application contains call history information that you can use to diagnose problems with your Cisco EGW 2200. This section includes the information you need to translate the hexadecimal codes in the Reason Code column of the call history table into diagnostic information.

The Reason Code data is based on the format specified in the ITU-T specification, Q.850. The data format is as follows:

Figure 1 Reason Code Data Format

8	7	6	5	4	3	2	1
Extension 1	Coding standard		Spare 0	Location			
Extension 1	Cause value						

To translate the reason codes, you must first convert the hexadecimal value into binary. For example, the value 0x83a9 is converted as follows:

- The first two digits (0x) are discarded.
- The remaining four digits represent the two bytes that make up the cause and location data.
- The first two digits (83) have a binary equivalent of 10000011 (1000 = 8, 0011 = 3).
- The second two digits (a9) have a binary equivalent of 10101001 (1010 = a, 1001 = 9).

You can then use your binary value to determine the call completion information based on the definitions for each of the reason code data elements. These data elements are described in the sections that follow.

Coding Standard

The coding standard information is found in bits 7 and 6 of the first byte. The definitions for each of the values is in the Coding Standard Field Definitions table.



Table 1 *Coding Standard Field Definitions*

Bit Value	Definition
00	ITU-T standardized coding (The other coding standards are used only when the desired cause value cannot be represented with ITU-T standardized coding)
01	ISO/IEC standard
10	National standard
11	Standard specific to identified location

Location

The location information is found in bits 4 through 1 of the first byte. The definitions for each of the values are in the Location Field Definitions table.


Note

Any location field value other than those that appear in the following table is spare.

Table 2 *Location Field Definitions*

Bit Value	Definition
0000	User (U)
0001	Private network serving the local user (LPN)
0010	Public network serving the local user (LN)
0011	Transit network (TN)
0100	Public network serving the remote user (RLN)
0101	Private network serving the remote user (RPN)
0111	International network (INTL)
1010	Network beyond interworking point (BI)
1100	Reserved for national use
1101	Reserved for national use
1110	Reserved for national use
1111	Reserved for national use

Cause Value

Bits 1 through 7 of the second byte are used for the cause value. The first three bits (7, 6, and 5) are used to define the class, which indicates the nature of the event. The definitions for each of the class values is in the Class Field Definitions table.

Table 3 *Class Field Definitions*

Bit Value	Definition
000	Normal event
001	Normal event
010	Resource unavailable
011	Service or option not available
100	Service or option not implemented
101	Invalid message (for example, parameter out of range)
110	Protocol error (for example, unknown message)
111	Interworking

Cause values are associated with each class type. They are defined in the tables that follow.

Table 4 Definitions for Normal Event Cause Values

Cause Class	Cause Value	Event Number	Definition
000	0001	1	Unallocated (unassigned) number—Called party cannot be reached. Although the called party number is in a valid format, it is not currently allocated (assigned).
000	0010	2	No route to specified transit network—Equipment sending this cause has received a request to route the call through a transit network that it does not recognize. The equipment sending this cause does not recognize the transit network either because the transit network does not exist or because that transit network does not serve the equipment that is sending this cause.
000	0011	3	No route to destination—Called party cannot be reached because the network through which the call has been routed does not serve the destination desired.
000	0100	4	Send special information tone—Called party cannot be reached for reasons that are of a long-term nature. The special information tone should be returned to the calling party.
000	0101	5	Misdialed trunk prefix—A trunk prefix has been erroneously included in the called party number.
000	0110	6	Channel unacceptable—Channel most recently identified is not acceptable to the sending entity for use in this call.
000	0111	7	Call awarded and being delivered in an established channel—User has been awarded the incoming call, and the incoming call is being connected to a channel already established for that user for similar calls.
000	1000	8	Preemption—Call is being preempted.
000	1001	9	Preemption (circuit reserved for reuse)—Call is being preempted and the circuit is reserved for reuse by the preempting exchange.
000	1110	14	Exchange detected that the called number was ported out.
001	0000	16	Normal call clearing—Call is being cleared at the request of one of the users involved in the call.
001	0001	17	User busy—Called party is unable to accept another call because the user busy condition has been received.
001	0010	18	No user responding—Called party does not respond to a call establishment message with either an alerting or connect indication within the prescribed period of time.
001	0011	19	No answer from user (user alerted)—Called party has been alerted, but does not respond with a connect indication within a prescribed period of time.
001	0100	20	Subscriber absent—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.

Table 4 *Definitions for Normal Event Cause Values (continued)*

Cause Class	Cause Value	Event Number	Definition
001	0101	21	Call rejected—There are two possibilities: (1) The equipment sending this cause does not want to accept this call, although this equipment is neither busy nor incompatible, or (2) The network indicates that the call was cleared due to a supplementary service constraint.
001	0110	22	Number changed—Returned to the calling party when the called party number is no longer assigned.
001	0111	23	Redirecting to new destination—Used by a general ISUP protocol mechanism that can be invoked by an exchange that decides that the call should be set-up to a different called number.
001	1000	24	Call rejected due to feature at the destination.
001	1001	25	Exchange routing error—Destination indicated by the user cannot be reached, because an intermediate exchange reached its hop count limit, causing the call to be released.
001	1010	26	Nonselected user clearing—User has not been awarded the incoming call.
001	1011	27	Destination out-of-order—User cannot be reached because the interface to the destination is not working correctly. The problem is a signaling message that could not be delivered to the remote party.
001	1100	28	Invalid number format—Called party number is not in a valid format or is not complete.
001	1101	29	Facility rejected—A supplementary service requested by the user cannot be provided by the network.
001	1110	30	Response to a STATUS ENQUIRY.
001	1111	31	Normal, unspecified.

Table 5 *Definitions for Resource Unavailable Event Cause Values*

Cause Value	Event Number	Definition
0010	34	No circuit/channel available—No appropriate circuit/channel is presently available to handle the call.
0110	38	Network out-of-order—Network is not functioning correctly, and the condition is likely to last a relatively long period of time. Immediately re-attempting the call is not likely to be successful.
0111	39	Permanent frame node connection out-of-service.
1000	40	Permanent frame node connection operational.
1001	41	Temporary failure—Network is not functioning correctly, but the condition is not likely to last a relatively long period of time. The user may want to try another call attempt almost immediately.
1010	42	Switching equipment congestion.

Table 5 *Definitions for Resource Unavailable Event Cause Values (continued)*

Cause Value	Event Number	Definition
1011	43	Access information discarded—Network could not deliver access information to the remote user as requested (the user-to-user, low-layer compatibility, high-layer compatibility, or subaddress information).
1100	44	Requested circuit or channel not available.
1110	46	Precedence call blocked—There are no circuits that can be preempted, or the called user is busy with a call of an equal or higher preemption level
1111	47	Resource unavailable, unspecified.

Table 6 *Definitions for Service or Option Not Available Event Cause Values*

Cause Value	Event Number	Definition
0001	49	Quality of service not available.
0010	50	Requested facility not subscribed—User is not authorized for the requested supplementary service, that is implemented by the equipment that generated this cause.
0101	53	Outgoing calls barred within the calling user group (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.
0111	55	Incoming calls barred within CUG—Although the called party is a member of the CUG for the incoming CUG call, incoming calls are not allowed to this member of the CUG.
1001	57	User is not authorized for the requested bearer capability, which is implemented on the equipment that generated this cause.
1010	58	Bearer capability not available.
1110	62	Inconsistency between designated outgoing access information and subscriber class.
1111	63	Service or option not available, unspecified.

Table 7 *Definitions for Service or Option Not Implemented Event Cause Values*

Cause Value	Event Number	Definition
0001	65	Bearer capability not implemented.
0010	66	Channel type not implemented.
0101	69	Requested facility not implemented.

Table 7 *Definitions for Service or Option Not Implemented Event Cause Values (continued)*

Cause Value	Event Number	Definition
0110	70	Only restricted digital information bearer capability is available—Calling party has requested an unrestricted bearer service, but the equipment sending this cause supports only the restricted version of the requested bearer capability.
1111	79	Service or option not implemented, unspecified.

Table 8 *Definitions for Invalid Message Event Cause Values*

Cause Value	Event Number	Definition
0001	81	Invalid call reference value—Equipment sending this cause has received a message with a call reference that is not in use on the user-interface.
0010	82	Identified channel does not exist—Equipment sending this cause has received a request to use a channel not activated on the interface for a call.
0011	83	A suspended call exists, but this call identity does not—Call resumption has been attempted with a call identity that differs from that in use for any suspended call.
0100	84	Call identity in use—Network has received a call suspended request containing a call identity (including the null call identity) that is already in use for a suspended call within the domain of interfaces over which the call might be resumed.
0101	85	No call suspended—Network has received a call resume request containing a call identity information element that does not indicate any suspended call within the domain of interfaces over which the call might be resumed.
0110	86	Call having the requested call identity has been cleared—Network has received a call resume request containing a call identity information element indicating a suspended call that has in the meantime been cleared (either by a network timeout or by a remote user).
0111	87	User not a member of CUG—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.
1000	88	Incompatible destination—Equipment sending this cause has received a request to establish a call that has low-layer compatibility, high-layer compatibility, or other compatibility attributes (such as data rate) that cannot be accommodated.
1010	90	Non-existent CUG.
1011	91	Invalid transit network selection.
1111	95	Invalid message, unspecified.

Table 9 Definitions for Protocol Error Event Cause Values

Cause Value	Event Number	Definition
0000	96	Mandatory information element is missing.
0001	97	Message type nonexistent or not implemented.
0010	98	Message not compatible with call state or message type nonexistent or not implemented.
0011	99	Information element or parameter nonexistent or not implemented.
0100	100	Invalid information element contents.
0101	101	Message not compatible with call state.
0110	102	Recovery on timer expiry.
0111	103	Parameter nonexistent or not implemented, passed on.
1110	110	Message with unrecognized parameter, discarded.
1111	111	Protocol error, unspecified.

Table 10 Definitions for Interworking Event Cause Values

Cause Value	Event Number	Definition
1111	127	Interworking, unspecified—During the processing of the call, this system interworked with a network that does not provide causes for actions it takes.