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SERIES H: AUDIOVISUAL AND MULTIMEDIA SYSTEMS  
Infrastructure of audiovisual services – Communication  
procedures

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**Gateway control protocol: Error code and  
service change reason description**

ITU-T Recommendation H.248.8



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## **ITU-T Recommendation H.248.8**

### **Gateway control protocol: Error code and service change reason description**

#### **Summary**

ITU-T Recommendation H.248.8 defines the service change reasons that are used in the core H.248.1 protocol. It lists the service change reason code associated with the service change reason code name. It provides a definition of when the service change reason is to be used. It also provides an indication of what text may be included in the service change extension to allow further interpretation of the service change reason. Clause 5 provides these details.

This revision addresses the following aspects:

- Addition of new error codes: 472, 473, 511, 543.
- Expansion of Error Codes: 401, 500.
- Clarification on the usage of error text.

NOTE – This Recommendation has been renamed. It was formerly known as Annex L to ITU-T Rec. H.248.

#### **Source**

ITU-T Recommendation H.248.8 was approved on 29 August 2007 by ITU-T Study Group 16 (2005-2008) under the ITU-T Recommendation A.8 procedure.

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In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

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As of the date of approval of this Recommendation, ITU had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementers are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database at <http://www.itu.int/ITU-T/ipr/>.

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# ITU-T Recommendation H.248.8

## Gateway control protocol: Error code and service change reason description

### 1 Scope

This Recommendation defines the error codes that are used in the core H.248.1 protocol. It lists the error code number associated with the error code name. It then provides a definition of when the error code is to be used and if the error code is defined in a package. It also provides an indication of what text may be included in the error text descriptor to allow further interpretation of the error code. Clause 4.2 provides these details. The normal actions for failed transactions and commands apply as specified in clause 8 of [ITU-T H.248.1]. Packages may define error codes not documented in this Recommendation. The IANA registry should be consulted for the complete list of error codes.

Error codes marked as "not used" are historical in nature and are for informational purposes only. These error codes should not be used.

This Recommendation also defines the service change reasons that are used in the core H.248.1 protocol. It lists the service change reason code associated with the service change reason code name. It provides a definition of when the service change reason is to be used. It also provides an indication of what text may be included in the service change extension to allow further interpretation of the service change reason. Clause 5.2 provides these details.

### 2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published. The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.

[ITU-T H.248.1] ITU-T Recommendation H.248.1 (2005), *Gateway control protocol: Version 3*.

### 3 Definitions

See [ITU-T H.248.1].

### 4 Error codes

#### 4.1 Assigning error codes

The following considerations SHALL be met to register an error code with IANA:

- 1) An error number and a one-line (80 characters maximum) string are registered for each error.
- 2) A complete description of the conditions under which the error is detected shall be included in a publicly available document. The description shall be sufficiently clear to differentiate the error from all other existing error codes.
- 3) The document should be available on a public web server and should have a stable URL.

- 4) Error numbers registered by recognized standards bodies shall have 3- or 4-character error numbers.
- 5) Error numbers registered by all other organizations or individuals shall have 4-character error numbers.
- 6) An error number shall not be redefined, nor modified except by the organization or individual that originally defined it, or their successors or assigns.

Parameters included in the error text shall be coded according to the principles as specified in Annex A or B of [ITU-T H.248.1]. If more than one parameter is included they shall be included in the order defined in this Recommendation and separated by a comma.

Error text may be included in the error descriptor, even for those error codes for which no specific error text is defined in this Recommendation. If error text is included it should contain the information defined in the error specification.

NOTE – The actions carried out after an error is discovered, which results in the sending of an error code described in clause 4.2, are specified in clause 8 of [ITU-T H.248.1].

## **4.2 Error code descriptions**

### **4.2.1 Error code #: 400**

**Name:** Syntax error in message

**Definition:** The transaction request(s) has been disregarded due to a syntax error detected at the message level. The message does not conform to the productions of messages as per Annex A or Annex B of [ITU-T H.248.1] as applicable. Used when, e.g., no transaction can be parsed.

**Error text in the error descriptor:** –

**Comment:** If the error is detected prior to determining a valid transaction ID, no meaningful action can be taken on the receipt of the error message.

### **4.2.2 Error code #: 401**

**Name:** Protocol error

**Definition:** The transaction or command request(s) has been disregarded due to a violation of Megaco protocol procedures having been detected.

**Error text in the error descriptor:** –

**Comment:** Use more specific error codes (e.g., 505) if possible.

### **4.2.3 Error code #: 402**

**Name:** Unauthorized

**Definition:** The command is not executed due to the originator of a command not being authorized to execute that command for the termination(s) affected by it.

**Error text in the error descriptor:** A string containing the command name is included in the error text in the error descriptor.

**Comment:** –

### **4.2.4 Error code #: 403**

**Name:** Syntax error in TransactionRequest

**Definition:** The transaction request is disregarded since it failed to match production of a TransactionRequest as per Annexes A and B of [ITU-T H.248.1], as applicable. Used when, e.g., it is not possible to determine the end of a transaction, or when no action can be parsed.



**Reference:** Clause 8.2.2 of [ITU-T H.248.1]

**Error text in the error descriptor:** –

**Comment:** If the error is detected prior to determining a valid transaction ID, no meaningful action can be taken on the receipt of the error message.

#### **4.2.5 Error code #: 406**

**Name:** Version not supported

**Definition:** This indicates a lack of support for the protocol version indicated in the message header of the message, or in the ServiceChangeVersion parameter. In the case of the version number being indicated in the message header, the message contents are disregarded.

**Reference:** Clauses 11.2 or 11.3 of [ITU-T H.248.1]

**Error text in the error descriptor:** –

**Comment:** –

#### **4.2.6 Error code #: 410**

**Name:** Incorrect identifier

**Definition:** The transaction request(s) has been disregarded due to a syntax error (illegal length or illegal character) having been found in a mId, transactionId, contextId, terminationId, propertyId, eventId, signalId, statisticsId, parameterId or requestID.

**Error text in the error descriptor:** The concerned ID is included in the error text in the error descriptor.

**Comment:** If the error is detected prior to determining a valid transaction ID, no meaningful action can be taken on the receipt of the error message.

#### **4.2.7 Error code #: 411**

**Name:** The transaction refers to an unknown ContextID

**Definition:** The ContextID referred to by an action in the transaction request is unknown and the action is therefore disregarded.

**Error text in the error descriptor:** –

**Comment:** –

#### **4.2.8 Error code #: 412**

**Name:** No ContextIDs available

**Definition:** The MG is unable to create a context in response to an "Add" or "Move" command with CHOOSE given as the ContextId because of a shortage of resources within the MG, and the action is disregarded.

**Error text in the error descriptor:** –

**Comment:** –

#### **4.2.9 Error code #: 413**

**Name:** Number of transactions in message exceeds maximum

**Definition:** The message contains more than the maximum allowed number of transactions. If the error descriptor is returned at a message level, the message has not been executed. If the error descriptor is returned at a transaction level, the transaction has not been executed.

**Error text in the error descriptor:** –

**Comment:** The MGC/MG should resend the message with the number of transactions reduced less than or equal to the maximum number.

#### **4.2.10 Error code #: 421**

**Name:** Unknown action or illegal combination of actions

**Definition:** Not used.

**Error text in the error descriptor:** –

**Comment:** –

#### **4.2.11 Error code #: 422**

**Name:** Syntax error in action

**Definition:** The action was disregarded due to the syntax of the action not conforming to the production of an actionRequest as per Annex A or B of [ITU-T H.248.1], as applicable. Used when it is not possible to determine the end of an action, when, e.g., no command can be parsed.

**Reference:** Clause 8.2.2 of [ITU-T H.248.1]

**Error text in the error descriptor:** –

**Comment:** Examples of errors are spelling errors, missing brackets.

#### **4.2.12 Error code #: 430**

**Name:** Unknown TerminationID

**Definition:** The TerminationID referred to by the command is unknown and the command is therefore disregarded. The termination ID is not found in the MG. This includes the NULL context. This is generated when the MG does not know which termination the MGC is trying to address.

**Error text in the error descriptor:** The TerminationID is included in the error text in the error descriptor.

**Comment:** –

#### **4.2.13 Error code #: 431**

**Name:** No TerminationID matched a wildcard

**Definition:** The command that included one or more wildcards (ALL or CHOOSE) TerminationID(s) is disregarded since the receiver of the command could not find an existing termination, or create a new termination matching the specified pattern.

**Error text in the error descriptor:** –

**Comment:** –

#### **4.2.14 Error code #: 432**

**Name:** Out of TerminationIDs or no TerminationID available

**Definition:** The add command, including the CHOOSE terminationID, is disregarded. The MG was unable to provide a TerminationID because it has exhausted the available range of TerminationIDs.

**Error text in the error descriptor:** –

**Comment:** –

#### 4.2.15 Error code #: 433

**Name:** TerminationID is already in a context

**Definition:** A TerminationID specified in an add command already exists within an active context and therefore the command is disregarded.

**Error text in the error descriptor:** The ContextID is included in the error text in the error descriptor.

**Comment:** –

#### 4.2.16 Error code #: 434

**Name:** Max number of terminations in a context exceeded

**Definition:** The MGC has requested that a termination be added or moved to a context that already contains a maximum number of terminations allowed. The command is therefore disregarded.

**Reference:** Clauses 6.1 and E.2.1 of [ITU-T H.248.1]

**Error text in the error descriptor:** –

**Comment:** –

#### 4.2.17 Error code #: 435

**Name:** Termination ID is not in specified context

**Definition:** A specific TerminationID specified in a modify, subtract, AuditValue, AuditCapabilities or ServiceChange command does not exist in a specified context and therefore the command is disregarded. This error occurs when the MGC sends a command with a valid TerminationID that is not in the specified contextID. This is used when the MG has a record of the termination but it is not where the MGC says it is.

**Error text in the error descriptor:** The ContextID where the termination is located is included in the error text in the error descriptor.

**Comment:** –

#### 4.2.18 Error code #: 440

**Name:** Unsupported or unknown package

**Definition:** The package name in a property, parameter, event, signal or statistic identifier is not supported by the receiver. The command related to the unknown identifier is disregarded.

**Error text in the error descriptor:** The package name is included in the error text in the error descriptor.

**Comment:** –

#### 4.2.19 Error code #: 441

**Name:** Missing remote or local descriptor

**Definition:** The requested command requires that the remote/local descriptor includes necessary or adequate information and therefore the action is not carried out.

**Error text in the error descriptor:** –

**Comment:** The error associated with this code may not be detectable until after the current command or subsequent commands result in failure to process the requested behaviour (e.g., the bearer setup fails).

#### 4.2.20 Error code #: 442

**Name:** Syntax error in command

**Definition:** A command request has failed to match the syntax of the commandRequest production and is therefore disregarded. Used when, e.g., end of a command cannot be determined.

**Reference:** Clause 8.2.2 of [ITU-T H.248.1]

**Error text in the error descriptor:** –

**Comment:** –

#### 4.2.21 Error code #: 443

**Name:** Unsupported or unknown command

**Definition:** The requested command is not recognized by the receiver and is therefore disregarded.

**Error text in the error descriptor:** A string containing the command name is included in the error text in the error descriptor.

**Comment:** –

#### 4.2.22 Error code #: 444

**Name:** Unsupported or unknown descriptor

**Definition:** The descriptor in a command request or reply is not recognized by the receiver and is therefore disregarded.

**Error text in the error descriptor:** A string containing the name of the descriptor is included in the error text in the error descriptor.

**Comment:** –

#### 4.2.23 Error code #: 445

**Name:** Unsupported or unknown property

**Definition:** Property name (Annex A of [ITU-T H.248.1]) or ItemID (Annex B of [ITU-T H.248.1]) of a property parameter within a descriptor is recognized but not supported and the command related to the property is not carried out.

**Error text in the error descriptor:** The property name (Annex A of [ITU-T H.248.1]) or ItemID (Annex B of [ITU-T H.248.1]) is included in the error text in the error descriptor.

**Comment:** –

#### 4.2.24 Error code #: 446

**Name:** Unsupported or unknown parameter

**Definition:** The parameter in a command request is not recognized by the receiver and the command related to the descriptor is not carried out.

**Error text in the error descriptor:** The ParameterID is included in the error text in the error descriptor.

**Comment:** –

#### 4.2.25 Error code #: 447

**Name:** Descriptor not legal in this command

**Definition:** The descriptor cannot be used in this command in accordance with the definition in Annexes A and B of [ITU-T H.248.1] and the command, including the descriptor, is not carried out.

**Error text in the error descriptor:** A string containing the name of the descriptor is included in the error text in the error descriptor.

**Comment:** –

#### **4.2.26 Error code #: 448**

**Name:** Descriptor appears twice in a command

**Definition:** The descriptor appears twice in the command and the command, including the descriptor, is not carried out.

**Error text in the error descriptor:** A string containing the name of the descriptor is included in the error text in the error descriptor.

**Comment:** –

#### **4.2.27 Error code #: 449**

**Name:** Unsupported or unknown parameter or property value

**Definition:** The value of a property or parameter within a descriptor is not recognized and the command, including the property/item, is not carried out.

**Error text in the error descriptor:** The parameter or property name followed by the unsupported or unknown value is included in the error text in the error descriptor.

**Comment:** –

#### **4.2.28 Error code #: 450**

**Name:** No such property in this package

**Definition:** Property name (Annex A of [ITU-T H.248.1]) or ItemID (Annex B of [ITU-T H.248.1]) of a property parameter within a descriptor is not recognized and the command, including the property/item, is not carried out.

**Error text in the error descriptor:** The property name (Annex A of [ITU-T H.248.1]) or ItemID (Annex B of [ITU-T H.248.1]) is included in the error text in the error descriptor.

**Comment:** –

#### **4.2.29 Error code #: 451**

**Name:** No such event in this package

**Definition:** The command, including the event name, is not executed because it is not considered to be a part of this version of the package.

**Error text in the error descriptor:** The event name is included in the error text in the error descriptor.

**Comment:** –

#### **4.2.30 Error code #: 452**

**Name:** No such signal in this package

**Definition:** The command, including the signal name, is not executed due to it not being considered by the MG to be a part of this version of the package.

**Error text in the error descriptor:** The signal name is included in the error text in the error descriptor.

**Comment:** –

#### 4.2.31 Error code #: 453

**Name:** No such statistic in this package

**Definition:** The command, including the statistic name, is not executed due to it not being considered by the MG to be a part of this version of the package.

**Error text in the error descriptor:** The statistic name is included in the error text in the error descriptor.

**Comment:** –

#### 4.2.32 Error code #: 454

**Name:** No such parameter value in this package

**Definition:** The command, including the parameter value, is not executed because it is not considered to be a part of this version of the package.

**Error text in the error descriptor:** The parameter name is included in the error text in the error descriptor.

**Comment:** –

#### 4.2.33 Error code #: 455

**Name:** Property illegal in this descriptor

**Definition:** The command, including the property, is disregarded since the MG does not consider it to be a part of this descriptor.

**Error text in the error descriptor:** The property name is included in the error text in the error descriptor.

**Comment:** –

#### 4.2.34 Error code #: 456

**Name:** Property appears twice in this descriptor

**Definition:** The command, including the property, is not executed due to the parameter or property appearing twice in this descriptor.

**Error text in the error descriptor:** The property name is included in the error text in the error descriptor.

**Comment:** –

#### 4.2.35 Error code #: 457

**Name:** Missing parameter in signal or event

**Definition:** The command was disregarded due to a missing mandatory parameter.

**Error text in the error descriptor:** If possible, the missing parameter name is included in the error text in the error descriptor.

**Comment:** –

#### 4.2.36 Error code #: 458

**Name:** Unexpected event/request ID

**Definition:** The command was disregarded because a notification for an event/request ID, that the MGC did not request, was received.

**Error text in the error descriptor:** The request ID is included in the error text in the error descriptor.

**Comment:** –

#### **4.2.37 Error code #: 460**

**Name:** Unable to set statistic on stream

**Definition:** The MG was unable to set the required statistic on a stream. The request has been disregarded.

**Error text in the error descriptor:** The statistic(s) ID(s).

**Comment:** –

#### **4.2.38 Error code #: 471**

**Name:** Implied add for multiplex failure

**Definition:** A termination listed within a multiplex descriptor could not be added to the current context and the "ADD" command is not carried out.

**Error text in the error descriptor:** The TerminationID is indicated in the error text in the error descriptor.

**Comment:** If the termination is already in a different active context, use error code 433.

#### **4.2.39 Error code #: 472**

**Name:** Required information missing

**Definition:** The required information to perform the function indicated by the property/signal/event/statistic sent from the MGC has not been provided to or provisioned on the MG. This dependent information may need to be set in one or more properties before the function/action can be performed. Therefore, the action is disregarded.

**Error text in the error descriptor:** The property name/signal name/event name/statistics name of the element sent by the MGC that required dependent information not available at the MG is included in the error text in the error descriptor.

**Comment:** –

#### **4.2.40 Error code #: 473**

**Name:** Conflicting property values

**Definition:** The values of two or more properties are incompatible with one another, and indicate an impossible or illogical operation. Therefore, the action is disregarded.

**Error text in the error descriptor:** The property names of the conflicting properties are included in the error text in the error descriptor.

**Comment:** –

#### **4.2.41 Error code #: 500**

**Name:** Internal software failure in the MG or MGC

**Definition:** A command could not be executed due to a software failure within the MG or MGC.

**Error text in the error descriptor:** –

**Comment:** For hardware failures, see error code 529.

#### **4.2.42 Error code #: 501**

**Name:** Not implemented

**Definition:** A property, parameter, signal, event or statistic mentioning the command has not been implemented.

**Error text in the error descriptor:** –

**Comment:** –

#### **4.2.43 Error code #: 502**

**Name:** Not ready

**Definition:** The command directed to a termination was not executed because of the service state of the termination.

**Error text in the error descriptor:** The service state is indicated in the error text in the error descriptor.

**Comment:** –

#### **4.2.44 Error code #: 503**

**Name:** Service unavailable

**Definition:** Not used.

**Error text in the error descriptor:** –

**Comment:** –

#### **4.2.45 Error code #: 504**

**Name:** Command received from unauthorized entity

**Definition:** Not used.

**Error text in the error descriptor:** –

**Comment:** –

#### **4.2.46 Error code #: 505**

**Name:** Transaction request received before a ServiceChange reply has been received

**Definition:** Sent by the MG/MGC that has sent a ServiceChange request to an MGC/MG and receives a transaction request from that MGC/MG before it has received the corresponding ServiceChange reply. The actions included in the transaction request are not carried out.

**Reference:** Clause 11.2 of [ITU-T H.248.1]

**Error text in the error descriptor:** –

**Comment:** –

#### **4.2.47 Error code #: 506**

**Name:** Number of TransactionPendings exceeded

**Definition:** Indicates that the maximum number of TransactionPendings have been received and that the transaction can be assumed to be in error.

**Error text in the error descriptor:** –

**Comment:** –



#### **4.2.48 Error code #: 510**

**Name:** Insufficient resources

**Definition:** The command(s) was rejected due to lack of common resources in the MG.

**Error text in the error descriptor:** The error text in the error descriptor includes the name or identity of the property, signal or event that represents a resource lacking in the MG.

**Comment:** –

#### **4.2.49 Error code #: 511**

**Name:** Temporarily busy

**Definition:** The command(s) was rejected due to a temporary busy condition in the MGC.

**Error text in the error descriptor:** –

**Comment:** Upon receiving this error code, the command may be resent as the busy condition may have abated.

#### **4.2.50 Error code #: 512**

**Name:** Media gateway unequipped to detect requested event

**Definition:** The MG is unable to detect the requested event due to lack of resources.

**Error text in the error descriptor:** –

**Comment:** –

#### **4.2.51 Error code #: 513**

**Name:** Media gateway unequipped to generate requested signals

**Definition:** The MG is unable to send the requested signal due to lack of resources.

**Error text in the error descriptor:** –

**Comment:** –

#### **4.2.52 Error code #: 514**

**Name:** Media gateway cannot send the specified announcement

**Definition:** The MG is unable to send the requested announcement due to lack of resources.

**Error text in the error descriptor:** –

**Comment:** –

#### **4.2.53 Error code #: 515**

**Name:** Unsupported media type

**Definition:** The stream included in the command is not supported by the MG, therefore the command is disregarded.

**Error text in the error descriptor:** The streamID is included in the error text in the error descriptor.

**Comment:** –

#### **4.2.54 Error code #: 517**

**Name:** Unsupported or invalid mode

**Definition:** The stream mode value is not supported for that stream. Therefore, the command related to that parameter is not executed.

**Error text in the error descriptor:** The streamID and stream mode value is included in the error text in the error descriptor.

**Comment:** –

#### **4.2.55 Error code #: 518**

**Name:** Event buffer full

**Definition:** Indicates that the event buffer in the MG is full.

**Error text in the error descriptor:** –

**Comment:** Sent in a notify command.

#### **4.2.56 Error code #: 519**

**Name:** Out of space to store digit map

**Definition:** The MG is out of storage space for DigitMap descriptors, or is not capable of using DigitMaps.

**Error text in the error descriptor:** –

**Comment:** The MGC should fall back to single digit collection or unnamed digit maps.

#### **4.2.57 Error code #: 520**

**Name:** Digit map undefined in the MG

**Definition:** The digit map named in a command is not defined in the MG, and the command is not executed.

**Error text in the error descriptor:** The DigitMap name is included in the error text in the error descriptor.

**Comment:** –

#### **4.2.58 Error code #: 521**

**Name:** Termination is "Service Changing"

**Definition:** Not used.

**Error text in the error descriptor:** –

**Comment:** –

#### **4.2.59 Error code #: 522**

**Name:** Functionality requested in topology triple not supported

**Definition:** The MG was unable to apply the topology requested as it does not support the required interconnectivity.

**Error text in the error descriptor:** The invalid topology triples.

**Comment:** –

#### **4.2.60 Error code #: 526**

**Name:** Insufficient bandwidth

**Definition:** The MG was unable to execute a command because of insufficient bandwidth at the network interface or externally to the MG.

**Error text in the error descriptor:** –

**Comment:** –

#### **4.2.61 Error code #: 529**

**Name:** Internal hardware failure in MG

**Definition:** The command could not be executed due to hardware failure in the MG.

**Error text in the error descriptor:** –

**Comment:** This error code is to be generated if the failure situation is not already covered by a more specific error, such as "514 – MG cannot send specified announcement", or whatever error is appropriate.

#### **4.2.62 Error code #: 530**

**Name:** Temporary network failure

**Definition:** The command could not be executed due to a problem in the surrounding network. The problem is considered to be of a short-term duration.

**Error text in the error descriptor:** –

**Comment:** –

#### **4.2.63 Error code #: 531**

**Name:** Permanent network failure

**Definition:** The command could not be executed due to a problem in the surrounding network. The problem is considered to be of a long-term duration.

**Error text in the error descriptor:** –

**Comment:** –

#### **4.2.64 Error code #: 532**

**Name:** Audited property, statistic, event or signal does not exist

**Definition:** The MGC has tried to audit the value of a property or statistic which is currently not instantiated, or a signal that is not active, or an event that is not instantiated.

**Error text in the error descriptor:** –

**Comment:** –

#### **4.2.65 Error code #: 533**

**Name:** Response exceeds maximum transport PDU size

**Definition:** The MG or MGC is unable to assemble a complete transaction response because the number of bytes for the message would exceed the maximum protocol data unit size of the underlying transport. The command instance in the response to that would have caused the overflow to be treated as if it were in error, and the remainder of the transaction is not executed, even if the command was marked "optional".

This situation will typically arise in conjunction with the use of wildcarding, which causes the original command to be expanded into a series of similar command instances.

If the request contained a wildcarded termination ID, the MGC or MG should send later requests with a smaller subset of termination IDs.

**Error text in the error descriptor:** –

**Comment:** Implementers' note: the detection of PDU overflow must occur at a point where there is still room in the PDU for the error descriptor.

#### **4.2.66 Error code #: 534**

**Name:** Illegal write or read only property

**Definition:** The MGC has tried to write a property whose characteristics are defined as read only. The command containing the property is disregarded.

**Error text in the error descriptor:** A string containing the package ID and property ID of the property trying to be written.

**Comment:** –

#### **4.2.67 Error code #: 542**

**Name:** Command is not allowed on this termination

**Definition:** This error is generated when the MGC has tried to request the processing of a command, which is not allowed on the addressed H.248 termination.

**Error text in the error descriptor:** –

**Comment:** –

#### **4.2.68 Error code #: 543**

**Name:** MGC requested event detection timestamp not supported

**Definition:** This error code indicates that the MG is unable to provide event detection timestamps associated for requested event.

**Error text in the error descriptor:** If applicable, the event identifier (i.e., pkgdName).

**Comment:** This error shall be generated on request of an event (e.g., through an add, modify or move request) not at detection time (e.g., notify request).

#### **4.2.69 Error code #: 581**

**Name:** Does not exist

**Definition:** Not used.

**Error text in the error descriptor:** –

**Comment:** –

## **5 Service change reasons**

### **5.1 Assigning service change reasons**

The following considerations SHALL be met to register service change reason with IANA:

- 1) A one-phrase, 80-character maximum, unique reason code is registered for each reason.
- 2) A complete description of the conditions under which the reason it is used is detected, shall be included in a publicly available document. The description shall be sufficiently clear to differentiate the reason from all other existing reasons.
- 3) The document should be available on a public web server and should have a stable URL.

Reason text included in the ServiceChangeReason shall be coded according to the principles as specified in Annex A or B of [ITU-T H.248.1] with a white space between the reason number and the reason text.

## 5.2 Service change reason description

### 5.2.1 Reason #: 900

**Name:** Service restored

**Definition:** It indicates that the entity indicated with the TerminationID is in ServiceState "In-Service".

**Reference:** –

**Text in the service change extension:** –

**Comment:** –

### 5.2.2 Reason #: 901

**Name:** Cold boot

**Definition:** This indicates that the entity indicated by the TerminationID is in ServiceState "In-Service", and that it has gone through a start or recovery action, and all associated contexts, except the null context, have been cleared.

**Reference:** –

**Text in the service change extension:** –

**Comment:** This reason code only applies for TerminationID root.

### 5.2.3 Reason #: 902

**Name:** Warm boot

**Definition:** This indicates that the entity indicated with the TerminationID is in ServiceState "In-Service", and that it has gone through a start or recovery action. All transactions in process may be lost, but otherwise all states are preserved on the termination.

**Reference:** –

**Text in the service change extension:** –

**Comment:** This reason code only applies for TerminationID root.

### 5.2.4 Reason #: 903

**Name:** MGC directed change

**Definition:** This indicates that the MG is directed by an MGC to use the receiver as MGC.

**Reference:** –

**Text in the service change extension:** –

**Comment:** Clause 11.5 of [ITU-T H.248.1]

### 5.2.5 Reason #: 904

**Name:** Termination malfunctioning

**Definition:** This indicates that the entity indicated with the TerminationID is in ServiceState "Out-Of-Service" due to some problem directly related to the termination.

**Reference:** –

**Text in the service change extension:** –

**Comment:** –

### 5.2.6 Reason #: 905

**Name:** Termination taken out of service

**Definition:** This indicates that the entity indicated with the TerminationID is in ServiceState "Out-Of-Service" due to maintenance action.

**Reference:** –

**Text in the service change extension:** –

**Comment:** –

### 5.2.7 Reason #: 906

**Name:** Loss of lower layer connectivity (e.g., downstream sync)

**Definition:** This indicates that the entity indicated with the TerminationID is in ServiceState "Out-Of-Service" due to the termination having experienced loss of lower layer connectivity on the incoming stream.

**Reference:** –

**Text in the service change extension:** –

**Comment:** –

### 5.2.8 Reason #: 907

**Name:** Transmission failure

**Definition:** This indicates that the entity indicated with the TerminationID is in ServiceState "Out-Of-Service" due to the termination having experienced a transmission failure, e.g., a degradation of transmission quality.

**Reference:** –

**Text in the service change extension:** –

**Comment:** –

### 5.2.9 Reason #: 908

**Name:** MG Impending failure

**Definition:** Indicates that the entity indicated with the TerminationID will go to the ServiceState "Out-Of-Service" and is unable to handle new traffic.

**Reference:** Clause 11.4 of [ITU-T H.248.1]

**Text in the service change extension:** –

**Comment:** This reason code only applies for TerminationID root.

### 5.2.10 Reason #: 909

**Name:** MGC impending failure

**Definition:** Indicates that the sender will go to the ServiceState "Out-Of-Service" and is unable to handle new transactions.

**Reference:** Clause 11.5 of [ITU-T H.248.1]

**Text in the service change extension:** –

**Comment:** –

### 5.2.11 Reason #: 910

**Name:** Media capability failure

**Definition:** This indicates that the entity indicated with the TerminationID has experienced a change of its media capability.

**Reference:** –

**Text in the service change extension:** –

**Comment:** –

### 5.2.12 Reason #: 911

**Name:** Modem capability failure

**Definition:** This indicates that the entity indicated with the TerminationID has experienced a change in its modem capability.

**Reference:** –

**Text in the service change extension:** –

**Comment:** –

### 5.2.13 Reason #: 912

**Name:** MUX capability failure

**Definition:** This indicates that the entity indicated with the TerminationID has experienced a change in its MUX capability.

**Reference:** –

**Text in the service change extension:** –

**Comment:** –

### 5.2.14 Reason #: 913

**Name:** Signal capability failure

**Definition:** This indicates that the entity indicated with the TerminationID has experienced a capability change for its signal capability. This includes changes in packages and/or signalIDs.

**Reference:** –

**Text in the service change extension:** –

**Comment:** –

### 5.2.15 Reason #: 914

**Name:** Event capability failure

**Definition:** This indicates that the entity indicated with the TerminationID has experienced a capability change for its events capability. This includes changes in packages and/or eventIDs.

**Reference:** –

**Text in the service change extension:** –

**Comment:** –

Note for codes 911-914; an audit with respect to the:

- Current packages;
- Current packages and properties (with values);

- Event descriptor;
- Signal descriptor;
- Digit map descriptor,

may be performed to get more information about the changed condition.

#### **5.2.16 Reason #: 915**

**Name:** State loss

**Definition:** This indicates that the entity indicated with the TerminationID has experienced loss of state and that the ServiceState is out of service.

**Reference:** –

**Text in the service change extension:** –

**Comment:** –

#### **5.2.17 Reason #: 916**

**Name:** Packages change

**Definition:** This indicates that the packages, or package versions, implemented on the media gateway have changed. The MGC should consider performing an AuditValue of the media gateway to determine which packages have changed.

**Reference:** –

**Text in the service change extension:** –

**Comment:** –

#### **5.2.18 Reason #: 917**

**Name:** Capabilities change

**Definition:** This indicates that the capabilities of the media gateway have changed. This is used in the case where the package has not changed but the capabilities of properties/parameters have. The MGC should consider performing an AuditCapabilities of the media gateway to determine which capabilities have changed.

**Reference:** –

**Text in the service change extension:** –

**Comment:** –

#### **5.2.19 Reason #: 918**

**Name:** Cancel graceful

**Definition:** This indicates that the previously sent ServiceChange with method graceful should be cancelled.

**Reference:** Clause F.4.1 of [ITU-T H.248.1]

**Text in the service change extension:** –

**Comment:** –

#### **5.2.20 Reason #: 919**

**Name:** Warm failover

**Definition:** This indicates that the media gateway has failed over to a secondary. All transactions in process may be lost, but otherwise all states are preserved on the MG.



**Reference:** –

**Text in the service change extension:** –

**Comment:** This reason code only applies for TerminationID root.

#### **5.2.21 Reason #: 920**

**Name:** Cold failover

**Definition:** This indicates that the media gateway has failed over to a secondary and all associated contexts, except the null context, have been cleared.

**Reference:** –

**Text in the service change extension:** –

**Comment:** This reason code only applies for TerminationID root.





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