

EDL Message Interface Specification

Issue 6 (CT/24.13.0013)

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1. Introduction

Any Balancing Service Provider (BSP) who participates Balancing Mechanism (BM), Replacement Reserve (RR) and Ancillary Services markets (for BMUs only) must have an EDL link to NGC.

Electronic Dispatch Logging (EDL) is the mechanism by which Control Points, the operational end-points for BSPs, receive instructions from NGENSO and redeclare availability and dynamic parameters to NGENSO.

1.1. Purpose and Scope

Issue 5 of document defines the structure and content of EDL instruction and submission messages that are supported in the current version of EDL, version 2.1. Changes are required to EDL to support the introduction of P344.

Version 2.1 supports the following additional changes:

1. Introduce new type of instruction, BOAR, for bid-offer acceptances resulting from the Replacement Reserve (RR) Market.

1.2 Definitions

Table 1 1 – Definitions

BM	Balancing Mechanism
BMU	Balancing Mechanism Unit
BOA	Bid Offer Acceptance
BSP	Balancing Service Provider
EDL	Electronic Dispatch Logging – A message transfer mechanism
MEL	Maximum Export Limit
MIL	Maximum Import Limit
MNZT	Minimum Non-Zero Time
MZT	Minimum Zero Time
NDZ	Notice to Deviate from Zero
NETA	New Electricity Trading Arrangements
NTB	Notice to Deliver Bids
NTO	Notice to Deliver Offers
RDR	Run-down Rates
RR	Replacement Reserve
RUR	Run-up Rates
SEL	Stable Export Limit
SIL	Stable Import Limit

1.3 Related Documents

- NETA – A Draft Specification for the Balancing Mechanism and Imbalance Settlement, Version 1.2, July 1999, The Office of Gas and Electricity Markets.
- NETA – Data Validation, Consistency and Defaulting Rules, CT/24.12.0003.

2. Message Structure Details

2.1. Message Guidelines - General Description

All messages are simple ASCII text strings to aid development of Application and Communication layers by all parties. With the exception of Server Messages the messages comprise three parts.

- A message Prefix Part
- A message Header Part
- A message Data Part

The message Prefix Part is not transmitted between computer systems. It is used for communication between the Communications Layers and the Server Layers of the system on each node.

Message Prefix Parts are removed by the Server Layer from messages received from the Communication Layer before sending the messages to the Wide-area Network Layer for transmission.

Messages Prefix Parts are added by the Server Layer to messages received from the Wide-area Network Layer before sending the messages to the Communication Layer.

The message Header Part is constructed by the Communication Layers.

The message Data Part is constructed by the Communication Layer, usually based on information from the Application Layer, although some messages are originated by the Communications Layer.

This separation between Header & Data Parts is notional. In practice, some elements of the Data Part will be processed by the Communications Layers. Furthermore, the boundary between Header and Data Parts has been deliberately constructed such that the common components of all messages are arranged at the beginning of the Data Part and so may be viewed as either Header or Data Parts.

All dates and times¹ are referenced to Greenwich Mean Time.

Times stamps within message Data Parts are to a resolution of one minute. The format is used is dd-mmm-yyyy hh:mm. (17 characters). Note that the valid range of the time component is 00:00 to 23:59.

Time stamps within message prefix parts are to a resolution of 10ms. The standard format used is dd-mmm-yyyy hh:mm:ss.nn. (23 characters). Note that the valid range of the time component is 00:00:00.00 to 23:59:59.99.

Fields within the Prefix Parts and the Data Parts are delimited by a space character. All message parts are terminated with a ^ character.

Fields containing variable length text items are left justified and space filled.

Fields containing variable length numeric items are right justified and zero filled.

The leading character of the day part of a date/time field may be a space.

Messages consist of three types; control, instruction and submission. Select/deselect control messages are sent from NGC to a Control Point while path/nopath control messages are sent from a Control Point to NGC. These messages control the availability of a BM Unit both to be instructed by NGC and to submit dynamic parameters. For instruction and submission messages to be exchanged, NGC must first have sent a select message while the Control Point must have sent a path message. Various message formats are defined for Ancillary Service instructions and Balancing Market Bid/Offer Acceptance instructions that are used by NGC to instruct a Control Point. Likewise, submission message formats are defined which allow a Control Point to submit various BM Unit dynamic parameters to NGC. If an error is detected by the Control Point in an instruction message, or by NGC in a submission message, the text of the message, or the truncated part thereof containing a reference number and log time will be sent back to the originator together with a pre-defined error code.

¹ Inter-machine time comparisons should only be to a minute resolution

2.2. Message Prefix Part

The message Prefix Part is different for each mailbox between the Communication Layer and the Server Layer. There is no Prefix Part on messages from the Communication Layer to the Server Layer on the station node, i.e. on messages in the CMS input mailbox.

Table 2 - Message Prefix Part for MMS Input Mailbox

Field Name	Start Position	Field Size	Description
Destination	1	6	Name of Control Point
Terminator	7	1	Part terminator character "^"

Table 3 - Message Prefix Part for MMS Output Mailbox

Field Name	Start Position	Field Size	Description
Destination	1	6	Name of Control Point
Time-Stamp	8	23	Time message received from Wide-area Network. Obtained from local node system clock.
Terminator	31	1	Part terminator character "^"

Table 4 - Message Prefix Part for CMS Output Mailbox

Field Name	Start Position	Field Size	Description
Timestamp	1	23	Time message received from Wide-area Network. Obtained from local node system clock.
Terminator	24	1	Part terminator character "^"

2.3. Message Header Part

The message Header Part is a packed string of four characters followed by a terminator. The character positions and sizes of the various fields are described in Table 5.

Table 5 - Message Header Part

Field Name	Start Position	Field Size	Description
Category	1	1	The category of message. Instruction, Submission etc. See Table 6.
Type	2	1	The type of the message. This field carries the dialogue between Communication Layers. Error! Reference source not found. for details.

Instruction Type	3	1	NOTE: This field is only used for Instruction Category Messages and is a space for all other Categories of message See Table 8 for details.
Error	4	1	Flag set to space by originating process. The message may be returned with the flag set. See Table 9 for details.
Terminator	5	1	Part terminator character "^"

Each transaction dialogue between Communication Layers consists of a single new outgoing message followed by one or more returned messages. Return messages are referenced to the original message and have return message types as shown in **Error! Reference source not found.**. They also retain the Message Category and Instruction Type of the original message.

Table 6 - Message Header Categories

Category	Description
C	Control Messages. See Table 10 for Data Part details
I	Instruction Messages. See Table 13, Table 14, Table 15, Table 16, Error! Reference source not found. and Table 17 for Data Part details
R	Submission Messages. See Table 22 for Data Part Details

Table 7 - Message Header Types

Code	Mnemonic	Direction	Meaning
N	New	Send	A new (real-time) message.
W	Waiting	Return	The remote Communications Layer has received & validated the referenced message. It is now waiting for manual action. This type is often called Technical Acknowledgement in earlier papers.
U	User Acknowledgements	Return	The remote operator has seen the referenced message.
A	Acceptance	Return	The remote operator accepts the referenced message.
R	Reject	Return	The remote operator rejects the referenced message.
T	Telephoned	Send	Upon re-connection of systems, messages that have been transmitted by telephone are sent electronically to allow the systems to reconcile themselves.
D	Dispute	Return	The remote system cannot reconcile a manually entered transaction.

Table 8 - Message Header Instruction Types

Instruction Type Code	Meaning
Space	Control Message, Submission Message, or EDL closed instruction messages. See Table 10, Table 12, Table 13, Table 14, Table 15, Table 21 & Table 22 for Data Part details
V	EDL Voltage Control Instruction. See Table 16 & Error! Reference source not found. for Data Part details.
P	Pumped Storage Message. See Table 17 for details

Table 9 - Message Header Error Flags

Error Flag	Meaning
Space	Original message
E	An error is detected in a received message. Either the original message is returned to the originator with a four-character error code appended to it or a new message identifying the reference number of the original message together with a 4-character error code is sent to the originator. The error code may relate to the syntax or data consistency of the message
X	A message is returned to the originator. The message was valid and data consistent when first received, but while waiting for a user acknowledgement, other parameters have changed and the message is no longer consistent. It is thus flagged as eXpired i.e. a valid message that is no longer meaningful.

2.4. Message Data Part

The content of the Message Data Part depends primarily on the Message Category and secondarily on the Message Type. In the case of Instruction Category Messages the Instruction Type also influences the Message Data Part. Single space characters to further enhance the readability of the messages separate fields within the Message Data Parts. The Message Data Parts for each category are defined in the following tables.

2.5. Control Messages

The Message Data Part for control messages is a maximum of 56 characters. The length and contents of control messages depends on the nature of the message, the options are detailed in Table 10

Table 10 - Message Data Part for Control Messages

Field Name	Start Position	Field Size	Description	Valid Type	Error Flag
Name	1	9	Control Point Name (VERSON message only) or BM Unit Name	All	
Ref Number	11	10	Message Reference Number	All	
Log Time	22	17	Time message logged by originating process	All	

Field Name	Start Position	Field Size	Description	Valid Type	Error Flag												
Type	40	6	Specifies the type of control message and the structure of the type dependent message part.	N													
Type dependant			<table border="1"> <thead> <tr> <th>Type</th> <th>Details</th> </tr> </thead> <tbody> <tr> <td>VERSON</td> <td>See Table 12</td> </tr> <tr> <td>SELECT</td> <td>The Control Point is selected by NGC for EDL.</td> </tr> <tr> <td>DESEL</td> <td>The Control Point is de-selected by NGC for EDL</td> </tr> <tr> <td>PATH</td> <td>There is a path from the Control Point Communication Layer to the BM Unit operator.</td> </tr> <tr> <td>NOPATH</td> <td>There is NO path from the station Communication Layer to the BM Unit operator</td> </tr> </tbody> </table>	Type	Details	VERSON	See Table 12	SELECT	The Control Point is selected by NGC for EDL.	DESEL	The Control Point is de-selected by NGC for EDL	PATH	There is a path from the Control Point Communication Layer to the BM Unit operator.	NOPATH	There is NO path from the station Communication Layer to the BM Unit operator		
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PATH	There is a path from the Control Point Communication Layer to the BM Unit operator.																
NOPATH	There is NO path from the station Communication Layer to the BM Unit operator																
Error Code	40, 47 or 52	4	See Table 11 for meaning	Any	E												
Terminator	44, 39, 46, 51, or 56	1	Part terminator character "^"	All													

Dispatch Instructions to an individual BM Unit via EDL will only take place once a PATH message from the control point, and a SELECT message from NGC have been sent. All other states will result in Instructions being issued by voice telephone.

Table 11 - Control Error Messages

Error Code	Description
C001	Invalid Control Point/BM Unit ID
C002	Invalid Control Type
C003	Unsupported Version Number
C004	Message arrived before VERSON accept

Submission and Control Messages can be issued at any time, irrespective of select and path states.

Table 12 - Message Data Part for Version Messages

Field Name	Start Position	Field Size	Description
Type	40	6	VERSON
Version	47	4	Latest Supported EDL Interface Definition. The version number is changeable and reflects the current level of messages supported at NGC and the Control Point. The current supported version is 2.1, i.e. 0021

2.6. Instruction Messages

2.6.1. Status Change Instruction Messages

The message Data Part for Status Change instruction messages is a maximum of 104 characters.

Note that Status Change instructions are to be issued for Ancillary Service purposes to change the operating state of a BM Unit, for example perhaps to instruct a Unit to synch to the declared FPN, or to instruct a Unit off. If a MW output level is to be instructed, a Bid/Offer Acceptance closed instruction must be issued.

Table 13 - Message Data Part for Status Change Instruction Messages

Field Name	Start Position	Field Size	Description	Valid Type	Error Flag
Name	1	9	BM Unit Name	All	
Ref Number	11	10	Instruction Reference Number	All	
Log Time	22	17	Time message logged by originating process	All	
Start Instruction Code	40	5	This may be one of the following codes SYN, HTS or the numeric value 0.	N, T	
Start Reserve	46	3	Not used.	N, T	
Start Time	50	17	Start time of the instruction.	N, T	
Reason Code	68	3	Three character reason code applied to steam plant; the first character explains why the instruction was issued, the second character indicates whether the BM Unit is in frequency response mode.	N, T	
Target Instruction Code	72	5	This may be one of the following codes OFF, HTS, CHS or the numeric value 0.	N, T	
Target Reserve	78	3	Not used.	N, T	
Target Time	82	17	Target time of the instruction.	N, T	

Field Name	Start Position	Field Size	Description	Valid Type	Error Flag
Error Code	40, 100	4	See Table 21 for meaning	Any	E, X
Terminator	39, 44, 99 or 104	1	Part terminator character "^"	All	

Participants and Vendors should contact NGC for an up-to-date list of reason codes and an accompanying explanation.

2.6.2. Bid / Offer Acceptance and Deemed Instruction Message

A Bid Offer Acceptance will be sent to either accept BM Bids/Offer in the Balancing Mechanism or the conversion of a Replacement Reserve Acceptance in the RR Market. The closed instruction must contain at least two MW / time value pairs up to a maximum of five value pairs that describe a closed volume of energy (in conjunction with the physical notification and any relevant previously accepted BOAs).

The message Data Part for an instruction is a maximum of 183 characters in length.

Table 14 - Message Data Part for BOA and Deemed Closed Instruction Messages

Field Name	Start Position	Field Size	Description	Valid Type	Error Flag
Name	1	9	BM Unit Name	All	
Ref Number	11	10	Instruction Reference Number	All	
Log Time	22	17	Time message logged by originating process	All	
Type	40	4	Type of instruction. BOAI, DEEM or BOAR	N, T	
BOA Number	45	10	BM Unit Bid/Offer Acceptance Number	N, T	
Number of Data Points	56	2	Count of the number of MW / Time pairs that make up this closed instruction. There must be a minimum of 2 pairs and a maximum of 5.	N, T	
MW1	59	5	MW Value 1	±nnnn	N,T
T1	65	17	Time value 1		
MW2	83	5	MW Value 2	Error code A	N, T
T2	89	17	Time value 2		
MW3	107	5	MW Value 3	Optional MW / Time pair 3; Error code B	N, T
T3	113	17	Time value 3		
MW4	131	5	MW Value 4	Optional MW / Time pair 4; Error code C	N, T
T4	137	17	Time value 4		
MW5	155	5	MW Value 5	Optional MW / Time pair 5; Error code D	N, T
T5	161	17	Time value 5		

Field Name	Start Position	Field Size	Description	Valid Type	Error Flag
Error Code	40, 107 A, 131 B, 155 C, 179 D	4	See Table 21 for meaning	Any	E, X
Terminator	39, 44, 106, 111, 130, 135, 154, 159, 178, 183	1	Part terminator character "^"	All	

2.6.3 Reason Code Instruction Messages

The message Data Part for a reason code instruction message is a maximum of 71 characters. This instruction sets the current reason code for a BM Unit. It is used, for example, to instruct a BM Unit's frequency response.

Table 15 - Message Data Part for Change of Reason Code Instruction Messages

Field Name	Start Position	Field Size	Description	Valid Type	Error Flag
Name	1	9	BM Unit Name	All	
Ref Number	11	10	Instruction Reference Number	All	
Log Time	22	17	Time message logged by originating process	All	
Type	40	4	Type of instruction. REAS	N, T	
Reason Code	45	3	Three character reason code.	N, T	
Start Time	49	17	Start time of the instruction.	N, T	
Error Code	40, 67	4	See Table 21 for meaning	Any	E, X
Terminator	39, 44, 66 or 71	1	Part terminator character "^"	All	

Participants and Vendors should contact NGC for an up-to-date list of reason codes and an accompanying explanation.

2.6.4. Voltage / MVAR Instruction Messages

The message Data Part for Voltage Instruction messages is a maximum of 73 characters. All voltage control instructions are supported by EDL level 2 (VERSON 0021).

Table 16 - Message Data Part for Voltage / MVAR Instruction Messages (version 2.1)

Field Name	Start Position	Field Size	Description	Valid Type	Error Flag
Name	1	9	BM Unit Name	All	
Ref Number	11	10	Instruction Reference Number	All	
Log Time	22	17	Time message logged by originating process	All	
Type	40	4	Type of instruction. MVAR or VOLT	N, T	
Value	45	4	Target value as a whole number preceded by minus ("-") = negative value), plus ("+" = positive value), or space (" " = positive value) and with 3 digits (i.e. leading zero's always supplied). Note: + zero & - zero are treated as same instruction	N, T	
Target Time	50	17	Target time of the MVAR or VOLT instruction.	N, T	
Error Code	40, 68	4	See Table 21 for meaning	Any	E, X
Terminator	39, 44, 67 or 72	1	Part terminator character "^"	All	

2.6.5. Pumped Storage Instruction Messages

For Pumped Storage plant MW loading and pump instructions will use the closed instruction format given in Table 17.

The following message format will be used to set a pumped storage unit's:

- current reason code
- droop value
- low frequency relay value
- current operating state

*Voltage instruction messages will be in the standard format as described in **Error! Reference source not found.***

Table 17 - Message Data Part for Pumped Storage Unit Instruction Messages

Field Name	Start Position	Field Size	Description	Valid Type	Error Flag
Name	1	9	Pumped Storage Unit Name	All	
Ref Number	11	10	Instruction Reference Number	All	
Log Time	22	17	Time message logged by originating process	All	
Reason Code	40	4	Four character reason code, (see Table 18 for more detail)	N, T	
Start Time	45	17	Start time of instruction.	N, T	

Field Name	Start Position	Field Size	Description	Valid Type	Error Flag
Target	63	5	Depending on the reason code: a mnemonic or a real value (see Table 19 for more detail).	N, T	
Target Time	69	17	Target time of the instruction.	N, T	
Error Code	87	4	See Table 21 for meaning	Any	E, X
Terminator	92	1	Part terminator character "^"	All	

Reason Codes can be one of the following:

Table 18 - Pumped Storage Reason Codes

Reason Code	Description
LFSM	Limited Frequency Sensitive Mode
PSHF	Carry Primary, Secondary and High Frequency Response
EMRG	Emergency instruction (instruction to operate outside declared parameters)
FRES	Fast Response Required
LFRY	Instruction to set a Low Frequency relay
DROP	Droop instruction
BKDN	Breakdown

Target Field can be one of the following:

Table 19 - Pumped Storage Targets

Target	Description
MW	Reason code to be applied to the Pumped Storage BOA Closed Instruction
SH	Shutdown
SG	Spin Gen
SP	Spin Pump
nn.nn	Set low frequency relay to nn.nn Hz. For example nn.nn could be 49.85. Where nn.nn is sent as 00.00 this should be interpreted as >remove LF relay setting=.
n.n	Set droop to n.n %

Table 20 - Pumped Storage allowable combinations

MW positive output	SH	SG	SP	MW negative output	nn.nn	n.n
--------------------	----	----	----	--------------------	-------	-----

LFSM	x	x	x	x	x
PSHF	x		x		
EMRG	x	x	x	x	x
FRES	x				
LFRY					x
DROP					x
BKDN		x			

2.6.6. Instruction Message Error Codes

The error codes in Table 21 can be used with instruction messages.

Table 21 - Instruction Error Message Codes

Error Code	Description
I001	Invalid BM Unit ID
I002	Invalid Reference Number (Current reference <input type="checkbox"/> Last reference, or no previous reference to instruction with this number)
I003	General instruction syntax error (instruction parsing failed)
I004	Instruction received for a BM Unit with NO PATH
I005	Instruction received before Version Control Procedure completed
I006	Telephoned Instruction received with an Invalid Reference Number.
I007	Attempt to recover previously rejected instruction
I008	Unable to log instruction
I009	Invalid Telegraph Instruction Number
I010	Attempt to Reject Reconciliation Instruction which has already been sent to Settlements

2.7. Submission Messages

Submission messages conform to the message structure and error checking detailed in Reference 2. The structure of the Data Part depends on the parameters being re-declared, the options are detailed in Table 22. The message Data Part for Submission messages is a maximum of 107 characters.

Table 22- Message Data Part for Submission Messages

Field Name	Start Position	Field Size	Description	Valid Type	Error Flag
Name	1	9	BM Unit Name	All	

Ref Number	11	10	Submission Reference Number	All
Log Time	22	17	Time message logged by originating process	All
Type	40	6	Specifies the type of Submission and the structure of the type dependent message part.	N, T
Type Dependent	47	Max 57	Type	
			MEL, MIL (error code A)	Table 23
			RURE, RURI, RDRE, RDRI (error code B)	Table 24
			NDZ, NTO, NTB, MZT, MNZT (error code C)	Table 25
			SEL, SIL (error code D)	Table 26
			MDVP (error code E)	Table 27
Error Code	40 any, 103 (A), 79 (B), 51 (C), 57 (D), 61 (E)	4	Not used.	Any E, X
Terminator	39, 44, 102, 107, 78, 83, 50, 55, 56, 61, 60, 65	1	Part terminator character "^"	All

Table 23- Message Data Part Variations for MEL/MIL Submission Messages

Field Name	Start Position	Field Size	Description
Type	40	6	"MEL" or "MIL" keyword
Time from	47	17	Start time
MW from	65	9	MW at time from (±nnnnnnnn)
Time to	75	17	End time
MW to	93	9	MW at time to (±nnnnnnnn)

Submission messages for RUR/RDR parameters contain fields that are optional. Unused fields are treated as null values. Null values are specified by filling the field with ‘*’ characters. The three valid combinations of parameters and nulls are identified in Table 24.

Table 24 - Message Data Part variations for RUR/RDR Export/Import Submissions

Field Name	Start Position	Field Size	Description	Valid Combinations		
Type	40	6	“RURE”, “RURI”, “RDRE”, or “RDRI” keywords			
Rate 1	47	6	First Rate	T	T	T
Elbow 2	54	5	Optional Second Elbow (±nnnn)	T	T	*****
Rate 2	60	6	Optional Second Rate	T	T	*****
Elbow 3	67	5	Optional Third Elbow (±nnnn)	T	*****	*****
Rate 3	73	6	Optional Third Rate	T	*****	*****

Table 25 - Message Data Part variations for Single Time Value Parameter Submissions

Field Name	Start Position	Field Size	Description
Type	40	6	“NDZ”, “NTO”, “NTB”, “MZT” or “MNZT” keyword
Time value	47	3	Number of minutes

Table 26 - Message Data Part Variations for SEL/SIL Submission Messages

Field Name	Start Position	Field Size	Description
Type	40	6	“SEL” or “SIL” keyword
Value	47	9	MW level

Table 27 - Message Data Part for variations for Maximum Delivery Submission Messages

Field Name	Start Position	Field Size	Description
Type	40	6	“MDVP” keyword
MDV	47	11	Max Delivery Volume (MW hours)
MDP	59	3	Max. Delivery Period (minutes)

2.7.1 Submission Error codes

A submission message is automatically acknowledged by NGC using a message with the message Header Part “RW ^”.

The submission undergoes syntax and validation checking. If the submission is valid, the return message with the message Header Part “RU ^” is sent to the Control Point; otherwise, if an error is encountered, a message with the message header part “RN E” is sent with a reason code appended.

Table 28 -Submission Error Codes

Error Code	Description
R001	Invalid syntax
R002	Invalid BM Unit
R003	Value out of bounds
R004	Invalid run rate break point
R005	Invalid run rate
R006	Invalid combination of run rates/breakpoints
R007	Invalid run rate breakpoint; breakpoints not monotonically increasing
R008	FROM time does not predate TO time
R009	Invalid FROM time
R010	Invalid TO time
R011	FROM time must be equal to or after SUBMISSION time
R999	Contact NGC

2.8. Undelivered Messages

There will be rare occasions when messages will not be acknowledged as successfully transferred from the Communications Layer on one node to the Communications Layer on another node. This may be due to

- the message was not transferred – communications failure
- the remote message server failed to acknowledge receipt of the successfully delivered message.

All such messages which cannot be delivered to the remote partner are deposited in the undelivered mailbox on the sending node. Any message Prefix Part in the input mailbox is also echoed to the undelivered mailbox. The Communications Layer must monitor this mailbox, and possibly re-present the message when connection is re-established.

2.9. Alarm Messages

The Server Layer continuously monitors the Wide-area Network Layer. Whenever a connection with a remote partner changes, a message is deposited in the Alarm mailbox.

Table 29 - Alarm codes for CMS Alarm Mailbox

Field Name	Start Position	Field Size	Description
Code	1	3	See Table 30.
Time Stamp	5	23	Time alarm raised by Server Layer, obtained from local node system clock.

Table 30 - CMS Alarm Codes

Alarm	Meaning
IC	Input channel connected
OC	Output channel connected
ID	Input channel disconnected
OD	Output channel disconnected
NX	Network Partner Exited

Table 31 - Alarm codes for the MMS Alarm Mailbox

Field Name	Start Position	Field Size	Description
Destination	1	6	Name of BM Unit
Code	8	6	See Table 32
Time Stamp	15	23	Time alarm raised by Server Layer, obtained from local node system clock.

Table 32 - MMS Alarm Codes

Alarm	Meaning
C-P	Primary Channel Connected
C-S	Secondary Channel Connected
D-P	Primary Channel Disconnected
D-P(R)	Primary Channel disconnected due to a link re-configuration
D-S(R)	Secondary Channel disconnected due to a link re-configuration
D-P(U)	Primary Channel disconnected due to a message being undelivered/unacknowledged
D-S(U)	Secondary Channel disconnected due to a message being undelivered/unacknowledged
D-S	Secondary Channel Disconnected
NX	Network Partner Exited

3. Document Status

AMENDMENT RECORD

Issue	Draft	Date	Author	Description of changes
6		13-Oct-2020	Chaitali	Updated NGESO branding
5	2	02-Jul-2020	Chaitali	Final Draft
5	1	25-Sep-2018	RDG	Updated to introduce new type of instruction, BOAR, for bid-offer acceptances resulting from the Replacement Reserve (RR) Market Document modernisation also undertaken
4		20-Jun-2000	NA	Add new NGC logo and quality watermark.
4	1	07-Jun-2000	NA	Updated following comments arising from EDL type testing.
3		09-May-2000	NA	Updated and issued after responding to comments on Issue 3, Draft 1.
3	1	13-Apr-2000	RDG	Updated to include Submission message reason codes
2		21-Jan-2000	NA	Issued following review.
2	1	19-Jan-2000	NA	Updated in response to comments received from OFGEM on Issue 1. Also add Start Time field to the REAS instruction, and increase the size of the elbow fields in the RUR/RDR messages from 4 to 5..
1		23-Dec-1999	NA	Updated in response to comments from the NETA project team.
1	1	16 Dec 1999	NA	Created from the document referred to in Reference 4.