Australian Direct Entry Payments and Dishonour report

NAB Connect
File format specifications
May 2024

Table of Contents

1. Overview

- Domestic Australian account payments are processed using the Australian Banking Association (ABA) file format and is used by all major Australian financial institutions to specify payments to be made from one bank account to one or more bank accounts

- Bulk payments can be credit or debit payments

- A common use case for direct entry files is for processing payroll as these are bulk payments sent to multiple payee accounts

- Credit payments are approved and processed based on available funds held (utilising NAB Connect)

- All files must have a Direct entry user ID (DE User ID) to comply with the file format.

  - Generic credit DE User IDs provided by NAB can be used at no cost. Facility specific DE IDs can be applied for at a once-off cost.

  - Debit DE User IDs are specific to each facility and has a cost per DE User ID.

- There are generally three types of issues preventing payments from processing successfully:

  1. Payment formatting errors

  2. Insufficient clearing funds or approved limits

  3. General account closures or debit blocks

- Payment files can be future dated up to up to 90 days in advance

- Payment files with a value date of up to 7 days in the past can be submitted for processing

- The Lodgement reference in a direct entry file is what appears in a beneficiary / payees account statement. It is recommended that the information included in the lodgement reference be a unique payment identifier.

2. File Specifications

- The file format is a fixed record length ASCII (American Standard Code for Information Interchange)
- Record length is 120 characters (bytes) long and separated from the next record by a carriage return/line feed (CR/LF)
- Strings of characters within the line represent specific pieces of information. For example, in a Detail Record line the characters as positions 21-30 represent the amount to be paid to or received from your customer.
- Each file contains 3 main blocks of records
  - Descriptive Record (**Type 0**) - one only per User ID
  - Detail Records (**Type 1**) - one or more
  - File Total Record (**Type 7**) - one only per User ID
- Each file can only contain 1 block of each record type

2.1 Record Descriptions

Record Type '0' – Descriptive Record

The first record in the file is the Descriptive Record

Character Position	Field Size	Field Description	User Specification
1	1	Record Type 0	Must be '0'
2-18	17	Blank	Leave blank
19-20	2	Reel Sequence Number	Must be numeric commencing at 01 Right justified Zero filled
21-23	3	Name of User Financial Institution	Must be an approved financial institution abbreviation. (Refer to AusPayNet)
24-30	7	Blank	Leave blank
31-56	26	Name of User supplying file	Left justified Leave blank BECS EBCDIC character set valid Must not be all blanks Should be User preferred name
57-62	6	Number of User supplying file	Must be User Identification Number, which is assigned by AusPayNet and User Financial Institutions Must be numeric Right justified Zero filled
63-74	12	Description of entries on file (for example "Payroll")	BECS EBCDIC character set valid Should accurately describe contents of file Left justified Leave blank
75-80	6	Date to be processed (i.e. the date transactions are released to all financial institutions)	Must be numeric and in the format of DDMMYY Must be a valid date Zero filled Date can be future dated up to 90 days
81-120	40	Blank	Leave blank

2.1.1 Record Type '1' – Detailed Records

Character Position	Field Size	Field Description	User Specification
1	1	Record Type 1	Must be '1'
2-8	7	BSB Number in format xxx-xxx	Must be numeric with a hyphen in character position 5
			Character positions 2 to 4 must be a valid 2 or 3 digit institution identifier issued by APCA
			(refer to AusPayNet website "BSB Numbers in Australia")
9-17	9	Account number to be credited/debited	Alpha-Numeric (26 letters of the alphabet)
			Hyphens & blanks only are valid
			Must not contain all blanks or all zeros
			Leading zeros, which are part of an account number, must be shown
			Edit out hyphens where account number exceeds nine characters
			Right justified
			Leave blank
18	1	Indicator	Must be a space
			or
			the letter 'N', 'T','W','X' or 'Y'
			• 'N' – for new or varied BSB number or name details
			• 'T' – for a drawing under a Transaction Negotiation Authority
			Withholding Tax Indicators:
			• 'W' - dividend paid to a resident of a country where a double tax agreement is in force
			• 'X' – dividend paid to a resident of any other country
			• 'Y' – interest paid to all non-residents. Where applicable, the amount of withholding tax is to appear in character positions 113-120
19-20	2	Transaction Code	Must only be valid industry standard transaction codes, numeric only
			Please refer to transaction codes for a full list
21-30	10	Amount	Numeric only
			Must be greater than zero
			Show in cents without punctuations
			Right justified
			Zero filled
			Unsigned
31-62	32	Title of account to be debited/credited	BECS EBCDIC character set valid
			Must not contain all blanks
			Left justified
			Leave blank
			Desirable format:
			• Surname followed by blank
			• Given names with a space between each name

Character Position	Field Size	Field Description	User Specification
63-80	18	Lodgement Reference (Reference as submitted by the User, indicating details of the origin of the entry, eg. Payroll Number, Invoice, Unique Customer Identifier). **NOTE:** This field is used by financial institutions for statement narrative	BECS EBCDIC character set valid Left justified Leave blank
81-87	7	BSB Number in format xxx-xxx *Trace: to enable retracing of the entry to its source if necessary.	Must be numeric with a hyphen in character position 84 Character positions 81-83 must be a valid 2 or 3 digit Institution identifier issued by APCA (refer to AusPayNet website "BSB Numbers in Australia")
88-96	9	Account Number *Trace: to enable retracing of the entry to its source if necessary.	Alpha-Numeric (26 letters of the alphabet) Hyphens & blanks only are valid Must not contain all blanks or all zeros Leading zeros, which are part of an account number, must be shown Edit out hyphens where account number exceeds nine characters Right justified Leave blank
97-112	16	Name of Remitter (Name of originator of the entry. This may vary from Name of User.)	BECS EBCDIC character set valid. Must not contain all blanks Left justified Leave blank **NOTE:** This field is used by financial institutions for statement narrative. When a Detail Record is used for a financial institution drawing under a Transaction Negotiation Authority, this field must contain the name of the Lodgement financial institution
113-120	8	Amount of withholding tax	Numeric only Show in cents without punctuation Right justified Zero filled Unsigned

*Trace - A Trace Account is used by the beneficiary bank to return the funds to the remitter in the event that they cannot be applied to the beneficiary's account. The trace account must be the User's own account or an account which the User has authority to operate and/or use as a Trace Record. In many cases, the Trace Record is also used to satisfy the requirements of the Anti-Money Laundering and Counter-Terrorism Financing Act 2006 (Cth) concerning the inclusion of Tracing Information in electronic funds transfer instructions.

2.1.2   Record Type '7' – File Total Record

Character Position	Field Size	Field Description	User Specification
1	1	Record Type 7	Must be '7'
2-8	7	BSB Number in format xxx-xxx	Must be numeric with a hyphen in character position 5
			Character positions 2 to 4 must be a valid 2 or 3 digit institution identifier issued by AusPayNet
			(refer to AusPayNet website "BSB Numbers in Australia)
9-20	12	Blank	Leave blank
21-30	10	File (User) Net Total Amount	Numeric only
			Show in cents without punctuation
			Right justified
			Zero filled
			Unsigned
			Should be all zeros in a self-balanced file
31-40	10	File (User) Credit Total Amount	Numeric only
			Show in cents without punctuation
			Right justified
			Zero filled
			Unsigned
			Should equal debit total
41-50	10	File (User) Debit Total	Numeric only
			Show in cents without punctuation
			Right justified
			Zero filled
			Unsigned
			Should equal credit total
51-74	24	Blank	Leave blank
75-80	6	File (User) count of Record Type 1	Numeric only
			Right justified
			Zero filled
81-120	40	Blank	Leave blank

2.1.3 Coded Character Set

Only the BECS EBCDIC Character Bit Structure is valid, this includes the following most commonly used characters:

- Numeric 0 to 9
- Alphabetic Uppercase A to Z and Lowercase a to z
- Special characters

Special Characters

Symbol	Meaning	Symbol	Meaning
+	Addition (plus) sign	-	Subtraction (minus) sign or hyphen
@	At sign	:	Colon
SP	Space	;	Semicolon
!	Exclamation mark	=	Equal sign
^	Circumflex	?	Question mark
$	Dollar sign	.	Period or decimal point
%	Percentage sign	#	Number sign (pound or hash)
&	Ampersand	_	Low line (underscore)
'	Apostrophe	,	Comma
(	Left parenthesis	[	Left square bracket
)	Right parenthesis	]	Right square bracket
*	Asterisk	/	Solidus (right slash)

Unprintable characters will be replaced with a period '.'

2.1.4 Transaction Codes

Code	Transaction type (Debit/Credit)	Transaction Description
13	Debit	Debit Items
50	Credit	Credit Items
51	Credit	Australian Government Security Interest
52	Credit	Basic Family Payments/Additional Family Payment
53	Credit	Pay
54	Credit	Pension
55	Credit	Allotment
56	Credit	Dividend
57	Credit	Debenture/Note of Interest

2.2 File Examples

2.2.1 Standard Direct Entry File

```
0                01NAB     NAB CONNECT SAMPLE DE FILE001122PAYROLL     011223
1063-210    123456 530000073023Beneficiary A          720056            083-000987654321NAB CONNECT     00000000
1063-001    123456 530000054000Beneficiary B          820226            083-000987654321NAB CONNECT     00000000
1192-901123456789 530000082679Beneficiary C          820226            083-000987654321NAB CONNECT     00000000
1402-728123456789 530000092360Beneficiary D          881195            083-000987654321NAB CONNECT     00000000
1063-210    123456 530000090167Beneficiary E          930671            083-000987654321NAB CONNECT     00000000
1063-210    123456 530000088248Beneficiary F          950850            083-000987654321NAB CONNECT     00000000
1012-009123456789 530000112655Beneficiary G          961566            083-000987654321NAB CONNECT     00000000
1012-009123456789 530000111970Beneficiary H          760094            083-000987654321NAB CONNECT     00000000
1063-210    123456 530000066060Beneficiary I          810330            083-000987654321NAB CONNECT     00000000
1063-210    123456 530000032724Beneficiary J          810330            083-000987654321NAB CONNECT     00000000
1402-728123456789 530000087646Beneficiary K          820282            083-000987654321NAB CONNECT     00000000
1012-003123456789 530000099018Beneficiary L          820298            083-000987654321NAB CONNECT     00000000
1063-210    123456 530000010000Beneficiary M          850993            083-000987654321NAB CONNECT     00000000
1063-210    123456 530000076274Beneficiary N          850993            083-000987654321NAB CONNECT     00000000
1012-009123456789 530000082755Beneficiary O          891271            083-000987654321NAB CONNECT     00000000
1063-210    123456 530000084486Beneficiary P          900831            083-000987654321NAB CONNECT     00000000
1062-919123456789 530000071411Beneficiary Q          800186            083-000987654321NAB CONNECT     00000000
1033-009123456789 530000038000Beneficiary R          840765            083-000987654321NAB CONNECT     00000000
1063-210    123456 530000054288Beneficiary R          840765            083-000987654321NAB CONNECT     00000000
1063-009123456789 530000064000Beneficiary S          851119            083-000987654321NAB CONNECT     00000000
1062-912123456789 530000067348Beneficiary T          851119            083-000987654321NAB CONNECT     00000000
1063-210    123456 530000077852Beneficiary U          861115            083-000987654321NAB CONNECT     00000000
1063-210    123456 530000056832Beneficiary V          880003            083-000987654321NAB CONNECT     00000000
1063-210    123456 530000086264Beneficiary W          901394            083-000987654321NAB CONNECT     00000000
1062-133123456789 530000098653Beneficiary X          930115            083-000987654321NAB CONNECT     00000000
1032-731123456789 530000061640Beneficiary Y          940484            083-000987654321NAB CONNECT     00000000
1553-056123456789 530000097501Beneficiary Z          951245            083-000987654321NAB CONNECT     00000000
1062-009123456789 530000020000Beneficiary 1          820045            083-000987654321NAB CONNECT     00000000
1063-210    123456 530000061839Beneficiary 2          820045            083-000987654321NAB CONNECT     00000000
1014-009123456789 530000102798Beneficiary 3          850165            083-000987654321NAB CONNECT     00000000
1063-210    123456 530000101877Beneficiary 4          740170            083-000987654321NAB CONNECT     00000000
1402-728123456789 530000090913Beneficiary 5          700079            083-000987654321NAB CONNECT     00000000
1063-210    123456 530000110067Beneficiary 6          610039            083-000987654321NAB CONNECT     00000000
1063-210    123456 530000045826Beneficiary 7          610039            083-000987654321NAB CONNECT     00000000
1484-009123456789 530000063537Beneficiary 8          860780            083-000987654321NAB CONNECT     00000000
1484-009123456789 530000020000Beneficiary 9          880468            083-000987654321NAB CONNECT     00000000
1063-210    123456 530000072321Beneficiary 10         880468            083-000987654321NAB CONNECT     00000000
1766-125123456789 530000074751Beneficiary 11         890253            083-000987654321NAB CONNECT     00000000
1063-210    123456 530000057070Beneficiary 12         740028            083-000987654321NAB CONNECT     00000000
1063-210    123456 530000085480Beneficiary 13         740028            083-000987654321NAB CONNECT     00000000
1033-009123456789 530000087447Beneficiary 14         911017            083-000987654321NAB CONNECT     00000000
1063-210    123456 530000063144Beneficiary 15         911494            083-000987654321NAB CONNECT     00000000
1063-210    123456 530000078000Beneficiary 16         860146            083-000987654321NAB CONNECT     00000000
1192-901123456789 530000074078Beneficiary 17         860146            083-000987654321NAB CONNECT     00000000
1063-210    123456 530000080865Beneficiary 18         930846            083-000987654321NAB CONNECT     00000000
1553-009123456789 530000065853Beneficiary 19         931059            083-000987654321NAB CONNECT     00000000
1012-009123456789 530000070063Beneficiary 20         931170            083-000987654321NAB CONNECT     00000000
1062-905123456789 530000065808Beneficiary 21         670066            083-000987654321NAB CONNECT     00000000
1083-000987654321 130003509591NAB CONNECT DE FILE       CR DE EXAMPLE     083-000987654321NAB CONNECT     00000000
7999-999          00000000000003509591000003509591                 000049
```

2.2.2 Self-Balanced Direct Credit File

```
0                 01NAB      NAB TEST                   1234569Credit      011223
1083-047111111111 500000000001 Beneficiary 1                    FOR DEMONSTRATION 083-047123456789NAB SAMPLE   TEST00000000
1083-047222222222 500000000001 Beneficiary 2                    FOR DEMONSTRATION 083-047123456789NAB SAMPLE   TEST00000000
1083-047333333333 500000000001 Beneficiary 3                    FOR DEMONSTRATION 083-047123456789NAB SAMPLE   TEST00000000
1083-047444444444 500000000001 Beneficiary 4                    FOR DEMONSTRATION 083-047123456789NAB SAMPLE   TEST00000000
1083-047555555555 500000000001 Beneficiary 5                    FOR DEMONSTRATION 083-047123456789NAB SAMPLE   TEST00000000
1083-047123456789 130000000005 NAB TEST 1                       FOR DEMONSTRATION 083-047123456789NAB SAMPLE   TEST00000000
7999-999          00000000000000000050000000005                          000006
```

2.2.3 Self-Balanced Direct Debit

```
0                 01NAB      NAB TEST                   123456DrDebit      011223
1083-047111111111 130000000001 Beneficiary 1                    FOR DEMONSTRATION 083-047123456789NAB SAMPLE   TEST00000000
1083-047222222222 130000000001 Beneficiary 2                    FOR DEMONSTRATION 083-047123456789NAB SAMPLE   TEST00000000
1083-047333333333 130000000001 Beneficiary 3                    FOR DEMONSTRATION 083-047123456789NAB SAMPLE   TEST00000000
1083-047444444444 130000000001 Beneficiary 4                    FOR DEMONSTRATION 083-047123456789NAB SAMPLE   TEST00000000
1083-047555555555 130000000001 Beneficiary 5                    FOR DEMONSTRATION 083-047123456789NAB SAMPLE   TEST00000000
1083-047123456789 500000000005 NAB TEST 1                       FOR DEMONSTRATION 083-047123456789NAB SAMPLE   TEST00000000
7999-999          00000000000000000050000000005                          000006
```

3. Direct Entry Returns Report (Dishonour)

The Direct Entry Returns report is used to communicate details of the electronic return of credit or debit items transactions.

The file format is a fixed record length. It uses lines of information 120 characters in length.

Report Type	File Name convention	Notes
By DE User ID	DTRET01_123456_ YYYYMMDD _ nnnnnnnn.1.txt Where: 123456 = Direct Entry User ID Y=Year M=Month D=Day nnnnnnnn = internal NAB reference number (unique per file)	Contains Direct Entry return information for previous business day based on the Direct Entry User ID (DEID) that the original Payment file was processed under. Limited to reporting on only one DEID per report file
By Trace Account	DTRET02_YYYYMMDD_null.txt Where: Y=Year M=Month D=Day	Contains Direct Entry return information for previous business day based on trace account(s) configured to Direct Link mailbox. Will report Direct Entry return information based upon trace account(s) regardless of the DEID used in original Payment file, provided trace account(s) were specified as part of original payment file. This report type may contain both Debit and Credit transaction information.

3.1 DE Returns Report format

3.1.1 File Structure

The DE Returns file will consist of a single header record, followed by multiple detail records, then a single file trailer record. Each record will be terminated with a Carriage Return (0x0D) and Line Feed (0x0A).

All records are fixed width and padded as detailed in the following sections.

Record	Remarks	Description	Length
HEADER	File Header	One per File	120
DETAIL	Transaction Detail Record	One or more per file	120
TRAILER	File Trailer	One per file	120

3.1.2 File Layout: Record Type 0 - Descriptive Record (Header)

Starting Byte	Field Length	Field Description	Source / Value
1	1	Record Id	Must be '0'
2	17	Not used	Spaces
19	2	Reel Sequence Number	'01'
21	3	Mnemonic of financial institution initiating return eg NAB	Must be an APCA approved three character mnemonic.
24	7	Not used	Spaces
31	26	Mnemonic of the sending member Eg: NAB	The three character mnemonic of the sending member only, not its full name. Must be an APCA approved financial institution abbreviation. Left justified, leave blank.
57	6	Direct Entry User id.	Must be numeric.
63	12	Description of entries on file (e.g. DE Returns)	Description of file. Spaces if description not available.
75	6	Date of return (the date transactions are returned to initiating financial institution)	DDMMYY format
81	40	Not used	Spaces

3.1.3   File Layout: Record Type 2 - Detail Record

Starting Byte	Field Length	Field Description	Source / Value
1	1	Record Id	Must be '2'
2	7	BSB Code (including hyphen "-")	Positions 81-87 of the original type 1 (credit/debit) record (Trace BSB).
9	9	Credit/Debit Account Number	Positions 88-96 of the original Type 1 Detail Record (Trace Acc).
18	1	Return Code	Valid industry return code. Numeric. One of : 1 Invalid BSB number 2 Payment stopped 3 Account closed 4 Customer deceased 5 No account or incorrect account number 6 Refer to customer 7 [deleted – not used] 8 Invalid User ID Number 9 Technically invalid
19	2	Transaction Code	Position 19 – 20 of the original type 1 record.
21	10	Amount	Positions 21 – 30 of the original type 1 record.
31	32	Account Name	Positions 31 – 62 of the original type 1 record. NOTE: BECS EBCDIC character set valid *however* other financial institutions may return this information in UPPER CASE.
63	18	Lodgement Reference	Positions 63 – 80 of the original type 1 record. NOTE: BECS EBCDIC character set valid *however* other financial institutions may return this information in UPPER CASE.
81	7	Trace BSB Code including hyphen	Positions 2 – 8 of the original type 1 record.
88	9	Trace Account Number	Positions 9 – 17 of the original type 1 record. NOTE: Where account number less than 9 digits this will be displayed as right justified and will be 0 (zero) filled
97	16	Remitter Name	Positions 97 – 112 of the original type 1 record. NOTE: BECS EBCDIC character set valid *however* other financial institutions may return this information in UPPER CASE.
113	2	Original day of processing (dd format)	Positions 75 – 76 of the original type 0 record.
115	6	Original User's ID Number	Positions 57 – 62 of the original type 0 record.

3.1.4   File Layout: Record Type 7 - File Total Record (Trailer)

Starting Byte	Field Length	Field Description	Source / Value
1	1	Record Id	Must be '7'
2	7	BSB Code	'999-999'
9	12	Not used	Spaces
21	10	Total File Net Amount	Calculated as (File Credit Amount – File Debit Amount). Right justified, zero filled, in cents. Value is unsigned. i.e absolute value of (credits – debits)
31	10	Total File Credit Amount	Calculated as total credit amount of transaction types '50 – 99' in record id '2'; right justified and zero filled, in cents.
41	10	Total File Debit Amount	Calculated as total debit amount of transaction type '00 – 49' in record id '2'; right justified and zero filled, in cents.
51	24	Not used	Spaces
75	6	Total Record Count	Total number of records of type '2'. Right justified, zero filled.
81	40	Not used	Spaces

3.2 Examples

3.2.1 Example: Direct Entry Returns Report (*by DE ID*)

```
0                 01NAB      NAB                    012345DE Returns   021123
2083-0471234567895130000018622Beneficiary 1        111111           083-047111111111NAB SAMPLE   TEST01012345
2083-0471234567896130000042350Beneficiary 2        222222           083-047222222222NAB SAMPLE   TEST01012345
2083-0471234567896130000002500Beneficiary 3        333333           083-047333333333NAB SAMPLE   TEST01012345
2083-0471234567896130000089937Beneficiary 4        444444           083-047444444444NAB SAMPLE   TEST01012345
2083-0471234567896130000019022Beneficiary 5        555555           083-047555555555NAB SAMPLE   TEST01012345
2083-0471234567896130000030995Beneficiary 6        666666           083-047666666666NAB SAMPLE   TEST01012345
2083-0471234567896130000006293Beneficiary 7        777777           083-047777777777NAB SAMPLE   TEST01012345
2083-0471234567896130000007008Beneficiary 8        888888           083-047888888888NAB SAMPLE   TEST01012345
2083-0471234567896130000052436Beneficiary 9        999999           083-047999999999NAB SAMPLE   TEST01012345
2083-0471234567896130000027619Beneficiary 1        121212           083-047111111111NAB SAMPLE   TEST01012345
7999-999         0000296782000000000000296782              000010
```

- File contains 10 detail (type '2') records
- DE User Id : 012345
- Original Lodgement Date: 1st of the month
- Total file Net amount :   0000296782
- Total file Credit amount :   0000000000
  Total file Debit amount :   0000296782

3.2.2 Example: Direct Entry Returns Report (*by Trace Account*)

```
0                 01NAB      NAB                    000000DE Returns   021123
2083-0471234567895130000018622Beneficiary 1        111111           083-047111111111NAB SAMPLE   TEST01111111
2083-0471234567896130000042350Beneficiary 2        222222           083-047222222222NAB SAMPLE   TEST01111111
2083-0471234567896130000002500Beneficiary 3        333333           083-047333333333NAB SAMPLE   TEST01111111
2083-0471234567896130000089937Beneficiary 4        444444           083-047444444444NAB SAMPLE   TEST01111111
2083-0471234567896130000019022Beneficiary 5        555555           083-047555555555NAB SAMPLE   TEST01111111
2083-0471234567896130000030995Beneficiary 6        666666           083-047666666666NAB SAMPLE   TEST01111111
2083-0471234567896130000006293Beneficiary 7        777777           083-047777777777NAB SAMPLE   TEST01111111
2083-0471234567896130000007008Beneficiary 8        888888           083-047888888888NAB SAMPLE   TEST01111111
2083-0471234567896130000052436Beneficiary 9        999999           083-047999999999NAB SAMPLE   TEST01111111
2083-0471234567896130000027619Beneficiary 1        121212           083-047111111111NAB SAMPLE   TEST01111111
7999-999         0000296782000000000000296782              000010
```

File contains 10 detail (type '2') records

- DE User Id's : 111111
- Original Lodgement Date 1st of the month
- Total file Net amount :   0000296782
- Total file Credit amount :   0000000000
  Total file Debit amount :   0000296782