

Corporate Online

Hash total algorithms for Direct Entry.

Issuer

Westpac Banking Corporation ABN 33 007 457 141
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About Corporate Online

Westpac Corporate Online is an internet-based electronic platform, providing a single point of entry to a suite of online transactional services specifically designed for major Australian, New Zealand and international corporations and government bodies.

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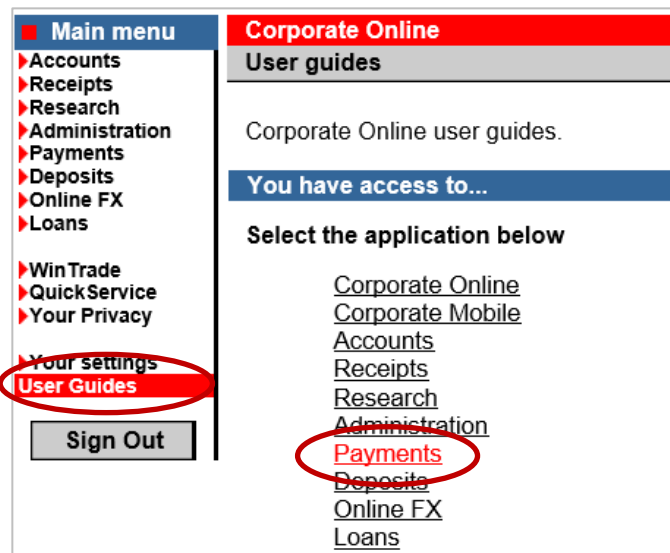
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About this Guide

This guide describes the hash total algorithms displayed by Westpac Corporate Online when processing direct entry files.

Where can I find a copy of this guide?

The most up-to-date versions of this and other Corporate Online user guides can be found on the **User guides** page of Corporate Online.



If you must print this document, **always download the PDF from Corporate Online** then print from that: don't print a saved PDF or photocopy a paper copy as it may not be current.

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About hash totals

A hash total is a number generated by an algorithm that is useful for cross-checking that a particular Direct Entry (DE) file is the correct file and contains the same transactions as it did when it was generated.

Hash totals are not unique and, because the algorithm is comparatively simple, are not a guarantee against fraud or tampering. However, it is very useful as a simple verification tool.

To make use of hash totals, the computer system you use to create the Direct Entry files you upload into Corporate Online needs to calculate and display (or report) the hash total as it generates the DE file. After loading that DE file into Corporate Online, you can then check the hash total displayed by Corporate Online against the hash total from your system. If the two hash totals match, it is likely the file is the correct one and contains the same transactions.

Hash totals are displayed on any screens showing the payment file details. For example:

Payment file details	
Office:	Porridge Shop Pty Ltd
File name:	BONUS PAYMENTS
Value date:	11 January 2006
Bank reference:	13525
Currency:	AUD
Hash total:	1111112864 

Hash totals are displayed for both imported files and those created using the file creation feature (including those created from templates). For file creation, the hash totals are not displayed on the Payment Summary screen at the end of the file creation procedure but are displayed on the Summary screen accessible via the Pending payments and Authorisation screens.

Which DE formats are hash totals displayed for?

Hash totals will be displayed on the relevant payment file screens when processing the following DE file formats:

- New Zealand Direct Entry (NZDD & NZDC) files in both the fixed file format and the CSV file format.
- Australian Direct Entry (AUDE) files

Hash totals are not displayed for New Zealand Direct Entry files in the Australian format.

Are hash totals mandatory?

Hash totals are not mandatory. Corporate Online processes direct entry files without requiring a valid hash total to be entered at any point. Hash totals are provided purely for the convenience of those customers that choose to use them.



New Zealand Direct Entry Files (NZDD & NZDC)

Hash total algorithm

Corporate Online calculates an NZDD/NZCC hash total by treating the following numeric fields as integers:

- Bank number
- Branch number
- Account number
- Account number suffix
- Value (in cents, absolute value, treating both credit and debit as positive)

and summing them for all debit and credit transactions in the file.

Worked example

The following example shows how a NZDD/NZCC hash total is calculated:

	Bank number	Branch number	Account Number	Suffix	Value in cents	Hash Total
Transaction#1	03	1300	10274	00	10000	
Transaction#2	03	1300	10274	02	20000	
Transaction#3	03	1300	10213	00	5025	
Hash subtotal	09	3900	30761	02	35025	69697

The hash total for this file is **69697**.



Australian Direct Entry (AUDE) files

Hash total algorithm

Corporate Online calculates an AUDE hash total by treating the following numeric fields as integers:

- Bank number
- Branch number
- Account number*
- Value (in cents, absolute value, treating both credit and debit as positive)

and summing them for all debit and credit transactions in the file.

* If the account number field contains non-numeric characters (e.g., the “S” used by some credit unions), substitute a zero for any non-numeric characters in their character positions, before converting the field to an integer.

Note that Australian BSBs (nnn-mmm) are split into the bank number (nnn) and the branch number (mmm) and treated separately.

Worked example

The following example shows how an AUDE hash total is calculated:

	Bank number	Branch number	Account Number	Value in cents	Hash Total
Transaction#1	032	300	10274	10000	
Transaction#2	032	300	10274	20000	
Transaction#3	032	300	10213	5025	
Hash subtotal	096	900	30761	35025	66782

The hash total for this file is **66782**.

