Metalogic Ltd Functional Specification   FS - IM0157

Author: Steve Baker	Project: 5159 - Howco	Date: 8th November 2017
Title: Import Index Enhancements		

Change Control

Issue Ref	Date Issued	By	Approve QC	Approve Issue	Summary
1	08/11/2017	SB			Initial release

Customer Approval

Company	Name	Signature	Date

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1. Requirements Summary

Howco have recently added a new source of sales order import data to the system, which means that they are now importing orders from three different sources:

1. Baker Orders
   a. Sent by Baker Oil Tools and processed by BizTalk
2. Quotation Tool
   a. Howco web quotation front-end
3. Haliburton Consignment
   a. Triggered by consumption of consignment material
   b. Also makes stock allocations against each imported sales item

Whilst these imports are working successfully, the indexes available in the iMetal import tables mean that care needs to be taken between each import source to ensure that duplicate indexes don't appear.

At the moment, the sales header import record is indexed by the following fields:

- Import Company Reference
  - Used to differentiate all of the iMetal databases
    - e.g. HOUQC, HOULIVE, UKQC, UKLIVE, etc
- Import Batch Number
  - Used to separate batches of orders to be imported
  - Sequential number
  - Important to ensure that this is different for each of Howco's three import sources
- Import Number
  - Sequential number
  - Important to ensure that this is different for each of Howco's three import sources because it is used as a key when searching for sales orders in the stock allocation import

Each of the three import sources that Howco use needs to ensure that they have a large gap between their Import Batch Number and Import Number sequences. For example:

- Baker Orders
  - 1 to 99,999,999
- Quotation Tool
  - 100,000,000 to 199,999,999
- Haliburton Consignment
  - 200,000,000 to 299,999,999

Any future import sources would also need to fit into this sequence grouping.

The Import Batch Number is an Integer field, which can be as large as 2,147,483,647 so there is plenty of room for differentiation, but if there are any errors in the sequencing process (e.g. if a sequence is reset) then problems could still occur

This document describes the addition of an 'Import Source' field to the sales document and stock allocation import indexes so that different sources can set this value and guarantee that they are kept apart from other sources, even if their batch numbers cross over.

For example, the three sources could be given the following source codes:

- Baker Orders
    - "BAKER"
- Quotation Tool
    - "QUOTES"
- Haliburton Consignment
    - "HALIBURTON"

2. Data Requirements

The following table changes will be required:

2.1 Import Sales Headers

The new index field will be added to the import sales headers table:

```
Table   : import_sales_headers
Database: IMPORTS

New Fields:
none

Index Changes:
import_sales_headers_pkey PRIMARY KEY, btree (import_company_reference, import_source,
import_batch_number, import_number)
```

2.2 Import Sales Items

The new index field will be added to the import sales items table:

```
Table   : import_sales_items
Database: IMPORTS

New Fields:
import_source                       varchar(50);

Index Changes:
import_sales_items_pkey PRIMARY KEY, btree (import_company_reference, import_source,
import_batch_number, import_number, import_item)
```

2.3 Import Sales Charges

The new index field will be added to the import sales charges table:

```
Table   : import_sales_charges
Database: IMPORTS

New Fields:
import_source                       varchar(50);

Index Changes:
import_sales_charges_pkey PRIMARY KEY, btree (import_company_reference, import_source,
import_batch_number, import_number, import_item, item_no)
```

2.4 Import Sales Costs

The new index field will be added to the import sales costs table:

```
Table   : import_sales_costs
Database: IMPORTS

New Fields:
import_source                        varchar(50);

Index Changes:
import_sales_costs_pkey PRIMARY KEY, btree (import_company_reference, import_source,
import_batch_number, import_number, import_item, item_no)
```

2.5 Import Stock Allocations

The Import Source field already exists on this table, but the primary index doesn't need to be changed as the index is a composite field anyway. The first secondary index will be modified, however:

```
Table   : import_stock_allocations
Database: IMPORTS

New Fields:
none

Index Changes:
import_stock_allocations_idx1 btree (import_company_reference, import_source,
import_batch_number, stock_branch_code, stock_item_number)
```

2.6 iMetal Sales Headers

The Import Source field is already stored on the iMetal sales headers table, but a new index will also be added to ensure that the sales headers can be found efficiently:

```
Table   : sales_headers
Database: iMetal

New Fields:
none

New Index:
sales_headers_idx21 NOT UNIQUE (import_source, import_batch_number, import_number)
```
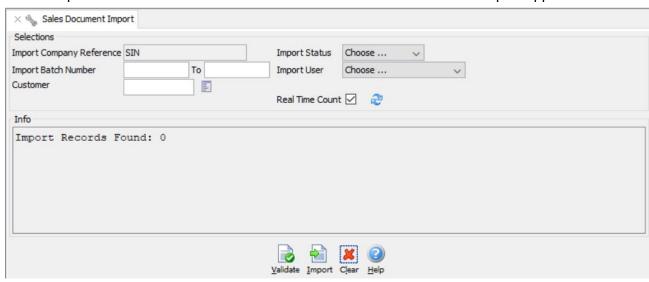
3. Specification of Functionality

The following application changes will be required:

3.1 Sales Document Import Selections

A new 'Import Source' selection field will be added to the sales document import application:

The field will be added (with a fifty-character limit) above the Import Status and Import User fields, which will both be shifted down by one line.

The field will select against the 'import source' field on the import sales headers record and will allow wildcard selections.
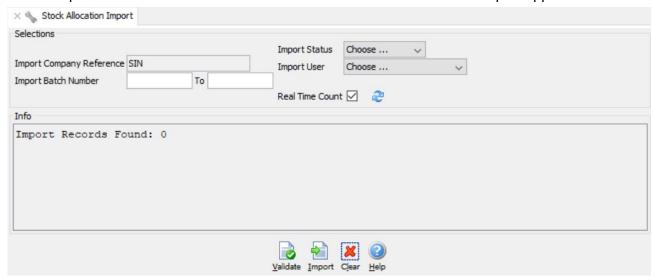
3.2 Command Line Sales Document Import

The sales document import routine can be called from the command line and contains the following parameters:

```
SalesDocumentImport BatchNumberFrom=n BatchNumberTo=n RunType=IMPORT/VALIDATE ImportUser=xxx
```

A new 'ImportSource' parameter will also be added to the command line options, which will select against the Import Source field on the import sales header record.

3.3 Stock Allocation Import Selections

A new 'Import Source' selection field will be added to the stock allocation import application:

The field will be added (with a fifty-character limit) above the Import Status and Import User fields, which will both be shifted down by one line.

The field will select against the 'import source' field on the import stock allocations record and will allow wildcard selections.

3.4 Command Line Stock Allocation Import

The stock allocation import routine can be called from the command line and contains the following parameters:

```
StockAllocationImport BatchNumberFrom=1 BatchNumberTo=n RunType=IMPORT/VALIDATE ImportUser=xxx
```

A new 'ImportSource' parameter will also be added to the command line options, which will select against the Import Source field on the import sales header record.

3.5 Sales Document Import Changes

The actual sales document import routine will be modified so that it makes use of the new Import Source field to differentiate between import records.

No change is required at header level, but the following import and validation routines will be modified:
- Sales Items
- Sales Charges
- Sales Costs

Currently, the import routine will read an import sales header record, then attempt to query each of the above import records using the following fields:
- Import Company Reference
- Import Batch Number
- Import Number

With the addition of the new Import Source field, the program will now be changed to query the sub records using the following:
- Import Company Reference
- Import Source
- Import Batch Number
- Import Number

3.6 Stock Allocation Import Changes

The stock allocation import program will be modified so that it uses the Import Source field as part of the key when searching for the sales order against which the allocations are to be made.

At the moment, the program performs one of two searches, depending on whether the import record contains an Allocation Header Number or an Allocation Import Number:

3.6.1 Allocation Header Number

With this search, the stock allocation import routine will attempt to find the iMetal sales order using the Order Branch and iMetal order number. This search will stay the same as it is now.

3.6.2 Allocation Import Number

With this search, the stock allocation import routine will attempt to find the iMetal sales order using the Order Branch and the original Import Number. This search will be modified so that it also searches for the iMetal Sales order by the Import Source field.

This will ensure that if two different sales orders were created with the same Import Number but from different Import Sources, that the allocation is made against the correct sales order.

5. Testing

The following tests will be required:

1. Create a standard set of sales order import records and make sure that the order is imported correctly
2. Create at least two further sets of sales order imports
    a. They should both have the same Import Batch Number and Import Number values, but different Import Source values
    b. Test the Sales Document Import client application to make sure that the new Import Source selection finds the correct orders
    c. Test the Sales Document Import command line application to make sure that the new Import Source selection finds the correct orders
    d. Run the import for both orders and make sure the records are created correctly
3. Create stock allocation import records which point to all three orders above
    a. Test the Stock Allocation Import client application to make sure that the new Import Source selection finds the correct stock allocation records
    b. Test the Stock Allocation Import command line application to make sure that the new Import Source selection finds the correct stock allocation records
    c. Run the import for all of the stock allocations and make sure that they are matched up with the correct iMetal orders (i.e. that they use the import source field as part of the search)