

**291809 v2.0**

Aptean Ltd  
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1 291809

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DHL C-TMS

## Planned Trips Flow

### FUNCTIONAL SPECIFICATION - 10.7

1/11/11 - 2.0

Reference: 291809 - TH-8LFCDX



## 1.1 Client Requirement

### Change Request Summary:

Planned Trips flow.

### Change Request Details:

Planned Trips flow: Development, Mapping consultation, implementation and UAT support of the Planned Trips flow from SAP into C-TMS.

To include:

Mapping workshop

interface build

CTMS set-up

testing support

implementation to live

### Benefits identified as a result of the change:

Migration away from ETHOS.

## 1.2 Solution

The inbound EDI order upload process will be altered to create trips based on the <ROUTE\_CODE> value passed into the <ORDER\_HEADER> level record. A new cost centre level parameter AUTOPLAN\_METHOD will be created. If this parameter is set to ?R?, a new procedure will be run to create and modify trips after all the orders have been created.

This will retrieve the orders that have been created in Route Code sequence. For each Route Code, the trip record should be retrieved and the all the existing orders that belong to that trip will be removed.

Then for each order passed in, a check will be made to determine if the order already belongs to a different trip by comparing the Route Code of that trip to the one passed in. If this is the case, then the order will be removed from that trip.

The trip the order used to belong to will then be revalidated. The order will then be added to the trip for the Route Code passed in. At the end of each Route Code, the dates and times for the trip will be recalculated and the trip will be revalidated.

It is expected that the orders passed in for each trip will be sent in the sequence the stops are expected to be created.

Note that OBS are assuming that the Route Code passed in is not expected to exceed 12 characters. There is also the assumption that the SAP delivery number (which will be stored within the 50 character External Ref against the order) is unique.

## 1.3 Scope

This change will be applied to system version 10.7.



## 2 Set-up

### 2.1 Pre-requisites

None

### 2.2 Menu Structure

Unchanged

### 2.3 Data

The inbound upload process using the standard ?TripOrder v2.23.xsd? is expected to be used. Note that OBS are assuming that the Route Code passed in is not expected to exceed 12 characters. There is also the assumption that the SAP delivery number (which will be stored within the 50 character External Ref against the order) is unique.

A new Cost Centre level parameter ?AUTOPLAN\_METHOD? will be created and set to ?R? for British Gypsum.



## 3 Functional Description

### 3.1 Business Data

The <ROUTE\_CODE> field against each order is expected to specify a unique trip identifier that will be stored against the Trip Header record created. This field has a maximum length of 12 characters.

### 3.2 Inbound Order Upload

This program will be altered to create trips based on the <ROUTE\_CODE> value passed against the <ORDER\_HEADER> level record.

After the orders have been processed, a new procedure will be added to be called if the ?AUTOPLAN\_METHOD? parameter is set to ?R?.

This will have the effect of creating a trip with a route code that matches the route code passed in against the orders. So for example of a file is sent in as follows:

#### File1

##### OMS\_REF Current Trip Id New Trip Id (based on ROUTE\_CODE)

REF1	TRIP1	TRIP3
REF2	TRIP2	TRIP3
REF3	NONE	TRIP3
REF4	TRIP1	TRIP3

Expected result: The 4 orders will become assigned to Trip3 with the stop sequence for the orders matching the sequence they are passed in. Trip1 and Trip2 will no longer contain REF1, REF2 and REF4 and will be revalidated. If Trip1 and Trip2 no longer contain any orders, those trips will be deleted.

#### File2

##### OMS\_REF Current Trip Id New Trip Id (based on ROUTE\_CODE)

REF5	NONE	TRIP3
REF2	TRIP3	TRIP4
REF3	TRIP3	TRIP4
REF4	TRIP3	TRIP5
REF6	NONE	TRIP4

Expected result: Orders REF1, REF2, REF3 and REF4 will be removed from TRIP3. Order REF5 will be added to TRIP3. Orders REF2, REF3 and REF6 will be added to TRIP4, any orders that were previously on TRIP4 will be removed. Order REF4 will be added to TRIP5, any orders that were previously on TRIP5 will be removed. Since order REF1 was not passed into the second file, it will not belong to a trip after this upload and will be at status ?UNSCHEDULED?.

In order to achieve this, firstly the orders will be processed and uploaded using the current xml order upload process. If any errors occur for any of the orders, then the file upload will be rejected and no auto-planning processing will occur. As usual, the order level errors will be visible within the ?XML orders? tab within the interface errors screen:



Calidus TMS - Windows Internet Explorer

http://saturn:7780/forms/frm servlet?config=mtstst

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Calidus TMS

Action C-TMS Modules Administration Edit Help Window

Interface Errors

INT\_ERR v1.51  
C-TMS v10.7.6

Orders EMTS Orders LOGNET ... Bookings DSG Tr... EFX Inb POD De... LOTS XML Or... XML Tr... PO Inb... PO Out... XML Ou... Unsche...

Msg Type Customer From Loc

ORD

Search

Interface ID Msg Type Status Cost Centre Customer From Loc To Loc Sched Name Early Avail Late Avail Early Del

DNG_ORD_1293.XML	ORD	FAILURE	EXEL	OPENFIELD	ARROWE	MERSBIRK	111022			
DNG_ORD_1211.XML	ORD	FAILURE	EXEL	OPENFIELD	DAN10000	MERSBIRK	110705	05-JUL-201	05-JUL-201	05-JUL-201
HCUK_TEST_ORDDG_26091100000C	ORD	FAILURE	HUK	OPENFIELD	EXELBAWT	MERSBIRK	110705	14-OCT-201	11-JUL-201	11-JUL-201
HCUK_TEST_ORDDG_26091100000C	ORD	FAILURE	HUK	OPENFIELD	EXELBAWT	MERSBIRK	110705	13-OCT-201	11-JUL-201	11-JUL-201
HCUK_TEST_ORDDG_26091100000C	ORD	FAILURE	HUK	OPENFIELD	EXELBAWT	MERSBIRK	110705	11-JUL-201	11-JUL-201	11-JUL-201
HCUK_TEST_ORDDG_26091100000C	ORD	FAILURE								
HCUK_TEST_ORDDG_26091100000C	ORD	FAILURE	HUK	OPENFIELD	EXELBAWT	MERSBIRK	110705	11-OCT-00	13-OCT-201	13-OCT-201
HCUK_TEST_ORDDG_26091100000C	ORD	FAILURE	HUK	OPENFIELD	EXELBAWT	MERSBIRK	110705	11-OCT-00	11-OCT-00	11-OCT-00
HCUK_TEST_ORDDG_26091100000C	ORD	FAILURE								

Include Success

Order Detail Validation Error

The early and late Collection and Delivery times must all be populated.

Line No	Prod Type Id	Item Identifier	Item Description	Qty Ordered	Qty To Deliver	Qty Delivered	Weight	Volume
1	AMBIENT	WEIGHT	TONNES	29		29000		

Order Line Validation Error

Close Action

Record: 1/?

Done

If all the orders are successfully uploaded and the ?AUTOPLAN\_METHOD? parameter is set to ?R? a new auto-planning procedure will be called. This procedure will retrieve the uploaded orders in ROUTE\_CODE and STOP\_SEQUENCE order. The STOP\_SEQUENCE in this case will be a count within each ROUTE\_CODE based on the sequence the orders are passed into the file. Note that stops that are passed into the file that have the same location will be assigned to the same stop. For each ROUTE\_CODE, the program will check for a C-TMS trip record. If one exists, then the trip will be removed from the system by calling the TRM.DELETE\_TRIP procedure. This will have the effect of un-scheduling all the orders from that trip and removing all the payments generated so far. Note that if the trip selected is at status ?En-Route? or later then it will not be possible to modify the trip. In this scenario, no changes will be made to the existing trip. The file upload for the orders will still be considered as being successful since the orders will process correctly, so the user will have to check that if there any trip level issues by accessing the ?XML Trips? canvas within the Interface Errors form:



Calidus TMS - Windows Internet Explorer

http://saturn:7780/forms/frm servlet?config=mtstst

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Calidus TMS

Action C-TMS Modules Administration Edit Help Window

Interface Errors

INT\_ERR v1.51  
C-TMS v10.7.6

Orders EMTS Orders LOGNET ... Bookings DSG Tr... EFX Inb POD De... LOTS XML Or... XML Tr... PO Inb... PO Out... XML Ou... Unsche...

Msg Type Customer From Loc

ORD

Search

Interface ID Msg Type Status Cost Centre Customer From Loc To Loc Sched Name Early Avail Late Avail Early Del

DNG_ORD_1293.XML	ORD	FAILURE	EXEL	OPENFIELD	ARROWE	MERSBIRK	111022			
DNG_ORD_1211.XML	ORD	FAILURE	EXEL	OPENFIELD	DAN10000	MERSBIRK	110705	05-JUL-201	05-JUL-201	05-JUL-201
HCUK_TEST_ORDDG_260911100000C	ORD	FAILURE	HUK	OPENFIELD	EXELBAWT	MERSBIRK	110705	14-OCT-201	11-JUL-201	11-JUL-201
HCUK_TEST_ORDDG_260911100000C	ORD	FAILURE	HUK	OPENFIELD	EXELBAWT	MERSBIRK	110705	13-OCT-201	11-JUL-201	11-JUL-201
HCUK_TEST_ORDDG_260911100000C	ORD	FAILURE	HUK	OPENFIELD	EXELBAWT	MERSBIRK	110705	11-JUL-201	11-JUL-201	11-JUL-201
HCUK_TEST_ORDDG_260911100000C	ORD	FAILURE								
HCUK_TEST_ORDDG_260911100000C	ORD	FAILURE	HUK	OPENFIELD	EXELBAWT	MERSBIRK	110705	11-OCT-00	13-OCT-201	13-OCT-201
HCUK_TEST_ORDDG_260911100000C	ORD	FAILURE	HUK	OPENFIELD	EXELBAWT	MERSBIRK	110705	11-OCT-00	11-OCT-00	11-OCT-00
HCUK_TEST_ORDDG_260911100000C	ORD	FAILURE								

Include Success

Order Detail Validation Error

The early and late Collection and Delivery times must all be populated.

Line No	Prod Type Id	Item Identifier	Item Description	Qty Ordered	Qty To Deliver	Qty Delivered	Weight	Volume
1	AMBIENT	WEIGHT	TONNES	29		29000		

Order Line Validation Error

Close Action

Record: 1/?

Done

If the original trip is deleted successfully, then the process will create a new trip record for the new ROUTE\_CODE. Note that this will have a different C-TMS TRIP\_ID value as this is based on a sequence. The trip will be created using the TRM.INSERT\_TRIP procedure.

For each order that is retrieved, the ROUTE\_CODE passed in will be compared to the ROUTE\_CODE for the trip that the order currently belongs to. If they are different, then the order will be removed from its current trip assuming the status is before ?En-Route? as before. That trip will then be revalidated by calling the TRM.CALC\_DISTANCE\_AND\_TIME procedure followed by the TRM.VALIDATE\_TRIP procedure.

Once the new trip has been created, each of the required orders will then be added to the new trip by calling the TRM.ADD\_ORDER\_TO\_TRIP procedure. Note that if the locations passed against the order are new, then the trip validation may fail. Under this circumstance, as with the current auto-planning process, all the orders for that trip will be set as ?UNSCHEDULED? and the user will be expected to create the trip manually. The user would also have the option of uploading the file a second time (with a different filename) after the location codes have been updated with valid Latitude and Longitude values.



After the last order to be added to the new trip has been processed, the new trip will be revalidated by calling the TRM.CALC\_DISTANCE\_AND\_TIME procedure followed by the TRM.VALIDATE\_TRIP procedure as before. Errors that occur attempting to create or validate the new trips will also be visible in the ?XML Trips? canvas of the ?Interface Errors? screen.

Note that the existing carrier-lane based autoplan process will be altered to be called only if the ?AUTOPLAN\_METHOD? parameter is set to ?L?. This will allow segregation of the autoplanning process.

### Modules to be changed

Module Name	Module Type	Notes
INT_XML_IN.sql	Inbound Order upload	
INT_XML_TRIP.sql	Inbound Trip Upload	New module

### References

Ref No	Document Title & ID	Version	Date
1	EST-291809 TH-8LFCDX Planned Trips Flow v1.0.doc	1.0	24/10/11

### Glossary

Term or Acronym	Meaning
C-TMS	Calidus TMS

### Document History

Version	Date	Status	Reason	Initials
0.1	24/10/11	Draft	Initial version	RE
1.0	27/10/11	Issue	Reviewed and Issued	MJC
1.1	28/10/11	Issue	Changes following client review	RE
2.0	01/11/11	Issue	Reviewed and Issued	MJC



## 4 AUTHORISED BY

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