



Aptean

CTMS Initial Setup Guide

CTMS USER GUIDE - 12.45

10/05/24 - 1.0
Reference: SETUP

Contents

1 Carrier Trip Plan.....	1
2 Initial Setup.....	2
3 Set Up C-TMS.....	3
3.1 Initial Setup.....	3
3.2 Basic Setup.....	3
3.3 Geographical.....	3
3.4 Admin User for the Customer.....	4
3.5 Resources.....	4
3.6 Accounts.....	4
3.7 Bespoke Setup.....	4
4 Business Data Maintenance.....	7
4.1 Group Names.....	7
4.2 CrossDock Paths.....	7
4.3 Adjustment Reason Codes.....	8
4.4 Reason Codes.....	8
4.5 Order Reason Codes.....	8
4.6 Min Ti RPE Quantity.....	9
4.7 Trip Statuses.....	9
4.8 Order Statuses.....	10
4.9 Service Types.....	10
4.10 Surcharges.....	10
4.11 Location Types.....	11
4.12 XDock Paths.....	11
4.13 Paragon Staging Posts.....	11
4.14 Delivery Method.....	12
4.15 Route Codes.....	12
4.16 Location Zones.....	12
4.17 Asset Origins.....	13
4.18 Time Zones.....	13
4.19 Order Types.....	14
4.20 Service Levels.....	14
4.21 Delivery Type.....	15
4.22 Transport Mode.....	15
4.23 Shift Patterns.....	15
4.24 Team Details.....	18
4.25 Storage Types.....	19
4.26 Note Types.....	19
4.27 Fixed Costs By Route.....	19
4.28 Booking Status.....	19
4.29 Route Priority.....	20
4.30 Paragon Keys.....	20
5 Static Data.....	21
5.1 Tabs.....	21
6 Order Entry Targets.....	26
7 Orders Interface.....	27
7.1 Tesla Orders Details.....	27
8 Scheduling Engine.....	30
8.1 System Parameters.....	30
8.2 Scheduling Engine Control.....	30
8.3 Customer Settings.....	31
8.4 DU Category.....	33
8.5 Carrier Type.....	34
8.6 Carrier Formats.....	34
8.7 Carrier Gazetteer.....	36
8.8 Carrier Rules.....	37

Contents

8 Scheduling Engine	
8.9 Location Zones.....	40
8.10 Fixed Routes.....	40
8.11 Schedule Rules.....	41
8.12 Location Fixed Route Details.....	42
8.13 Order Time Window Derivation.....	43
8.14 Scheduling using Parcel Carriers.....	45
8.15 Scheduling using 3PL Carriers.....	46
8.16 Scheduling using Wholesale Schedule.....	46
8.17 Scheduling using Mandated Carrier.....	47
8.18 Scheduling using Top Up Process.....	47
8.19 Scheduling using Network Schedule.....	48
8.20 Scheduling using NHSBT Schedule.....	48
8.21 Scheduling using Fixed Drop Schedule.....	48
8.22 Scheduling Engine Processing.....	49
8.23 Pack Confirmation/Labelling.....	49
8.24 Tracking References.....	49
8.25 Uncheduling Orders.....	50
8.26 Manual Trip Planning.....	50
8.27 CITD Files.....	51
8.28 Despatch Confirmation.....	51
8.29 Physical Manifests.....	51
8.30 Electronic Manifests.....	51
8.31 Paragon Considerations.....	51
8.32 Depot Sweep Processes.....	52
8.33 Potential Developments.....	53
9 SAVING.....	54
10 Scheduling Engine Overview.....	55
10.1 System Parameters.....	55
10.2 Scheduling Engine Control.....	55
10.3 Customer Settings.....	56
10.4 DU Category.....	58
10.5 Carrier Type.....	59
10.6 Carrier Formats.....	59
10.7 Carrier Gazetteer.....	61
10.8 Carrier Rules.....	62
10.9 Location Zones.....	65
10.10 Fixed Routes.....	65
10.11 Schedule Rules.....	66
10.12 Location Fixed Route Details.....	67
10.13 Order Time Window Derivation.....	68
10.14 Scheduling using Parcel Carriers.....	70
10.15 Scheduling using 3PL Carriers.....	71
10.16 Scheduling using Wholesale Schedule.....	71
10.17 Scheduling using Mandated Carrier.....	72
10.18 Scheduling using Top Up Process.....	72
10.19 Scheduling using Network Schedule.....	73
10.20 Scheduling using NHSBT Schedule.....	73
10.21 Scheduling using Fixed Drop Schedule.....	73
10.22 Scheduling Engine Processing.....	74
10.23 Pack Confirmation/Labelling.....	74
10.24 Tracking References.....	74
10.25 Uncheduling Orders.....	75
10.26 Manual Trip Planning.....	75
10.27 CITD Files.....	76
10.28 Despatch Confirmation.....	76
10.29 Physical Manifests.....	76
10.30 Electronic Manifests.....	76
10.31 Paragon Considerations.....	76
10.32 Depot Sweep Processes.....	77

Contents

10 Scheduling Engine Overview	
10.33 Potential Developments.....	78
11 Scheduling Maintenance.....	79
11.1 Schedule Rules Tab.....	79
11.2 Scheduling Engine Tab.....	80
11.3 Audit Tab.....	80
11.4 Top Up Tab.....	81
11.5 Delivery Schedule Tab.....	81
11.6 Further Configuration.....	82
12 SHIPMENT.....	83
13 Static Data.....	84
13.1 Tabs.....	84
14 Initial Setup Guide.....	89
15 Set Up C-TMS.....	90
15.1 Initial Setup.....	90
15.2 Basic Setup.....	90
15.3 Geographical.....	90
15.4 Admin User for the Customer.....	91
15.5 Resources.....	91
15.6 Accounts.....	91
15.7 Bespoke Setup.....	91

[illegible]

2 Initial Setup



3 Set Up C-TMS

 **Warning:** This is an incomplete guide.

3.1 Initial Setup

Start using the OBS Administrative user

3.2 Basic Setup

1. Set up the Cost Centre. This should not be the same name as the customer group or the customers. Convention is to end it with "-CC". Ensure that it is not more than 10 characters (C-ePOD limitation).
2. Set up the Customer Group - this is used to ring-fence Customers and Locations.
3. Customer - create each customer (supplier) for the implementation, accepting the defaults generally. Link these customers to the customer group.
4. Planning Group - from Business Data/Group Names, set up a planning group. This is used to group orders and filter the order well.

3.3 Geographical

1. Location Types - work out and create the location types for the contract. "RDC" must be used for depots. "BRANCH" is usually good for deliveries to primary transport to customer distribution centres, "HOME" for home deliveries, "SUPPLIER" for customer locations, etc. Only "RDC" is absolutely required.
2. Locations - Set up Locations by entering the Location Name, Address and assigning to the correct location type. Lat/Long and Timezone will be entered automatically if required. Ring-fence to the customer when creating, or select ALL if they apply to all customers (e.g. cross-dock depots within the transport network). At least the depots are required. Set loading rates. Default to Standard Load/Unload.
3. Regions and Region Depots should be setup, as shown below.

3.3.1 Regions and Region Depots

Owning Depot is defined as the depot that is responsible for planning a trip, and is used by access control to determine whether a planner should see an orders or trips for planning.

This logic depends on the creation of the following data:

- Create planning regions through postcode.
- Use [Static Data](#) Region Depot to link a planning region to a depot.
- Set up planning regions by postal region i.e. "L" could be assigned to a region "GBLIV" or "GBNW".

Locations created are automatically assigned to the planning region based on the postcode.

The postcode is extracted according to the rules applied against the [Countries](#). So, for GB, the postal region is extracted. For example, for a location with an address "L24 1XZ", the postal region "L" is extracted, and for postcode "NG6 8UZ", the postal region is "NG" (Nottingham).

If you want to change this automatic assignment, this can be done in the CTMS [Locations](#) screen - change the planning region in the screen against the location and tick "Retain Planning Region" before saving - the new region will be saved and the system will not automatically reset it.

Users can then be assigned a default depot through [Access Control](#). Your user can be based at a single depot (set through the BASED_AT user parameter), or your user can have access to all depots (set through the ALL_DEPOTS user parameter).



When a user has an assigned depot, most screens will automatically filter the data shown in the screens to show only the data matching the planning region or default depot. For example, the **Planning** screen will only show orders in the unscheduled order well from the planning regions owned by your depot, and trips from, to or through that owning depot configured against the user using the screen.

3.4 Admin User for the Customer

1. Using Access Control, create the admin user required just for that customer/transport network. Usually, this is easier to copy another user first.
2. Restrict the user to the home depot for that customer.
3. Assign the user to the correct group - usually, this user is the Admin user, and should be assigned to the already-existing ADMIN group.
4. Switch to this user now and test access is OK.

3.5 Resources

Set up the following:

1. DU Types
2. Carrier Groups
3. Carrier Types
4. Carriers
5. Carrier rules for restrictions, DUs and product types
6. Trailer types
7. Tractor/Trailer or Vehicles
8. Drivers
9. Delivery Types/Service Levels - use Standard if there are no specific requirements.
10. Products - link to default DU types, and loading rates. Default to Standard Load/Unload.

The user can now be restricted to carrier, and system defaults for DU types and Product Types can be set up.

3.6 Accounts

1. Set up an Account for:
 1. Customers
 2. Cost Centre
 3. Carrier
2. Set up Invoicing Requirements for the customer.
3. Set up Currency per customer and carrier.
4. Set up a contract between:
 1. Cost Centre and Customer, for revenue. Note that a contract **MUST** be set up for an order to be valid, or you will not be able to change the order status.
 2. Cost Centre and Carrier, for trip cost.
5. Set up Tariffs as required. Basic distance, with this revenue being slightly higher per mile than the trip cost, usually provides good demo results. e.g. 60p/75p per mile.

At this point, the system will be capable of being used to create orders and trips.

3.7 Bespoke Setup

- Cross-dock Paths
- Fixed Routes
- Fixed Schedules
- Additional Users and User Groups - adjust the Menus and Tabs required on the group if required.
- Execution systems/interfaces:
 - ◆ C-ePOD
 - ◆ Microlise SmartPOD



- ◆ TomTom WEBFLEET
- ◆ FlexiPOD
- C-PORTAL TTM

3.7.1 Fixed Routes

Parameters:

- AUTO_SCHEDULING must be configured to "Y" for the cost centre

3.7.1.1 Domestic/Home Delivery

For a domestic-style delivery mode (JIT planning, plan to final depot and then wait for final mile planning):

Parameters:

- TRM_LOC_RADIAL_ROUTES - "N"

Schedule Rules:

- Set the scheduling engine to "Home Delivery Network Schedule"
- Start the scheduling engine (3 minutes for testing, up to 5-15 for live)

Zones:

- Set up zones to go from each depot's catchment areas to every other depot.

Locations:

- Set preferred carrier up against each RDC, typically every carrier that will pass through that location, but definitely ones that originate routes at that location.

Routes:

- Auto-processing, defined depot, trailer type, defined carrier, execution days, number of trips. Ensure that the MODE is set to TRUNK (or some other desired mode).
- Stops:
 - ◆ Stop 1 - Location, Depot from which orders are currently based, all Mand, Fixed, PK and DL ticked, offset (number of minutes from midnight), Early and Late set to some minutes before/after the offset e.g. 90, Fill factor 1.0, PK cutoff half an hour before.
 - ◆ Stop 2 - cross-dock stop, Zone for orders, location to cross-dock through, Mand and DL ticked, offset, Early and Late..
 - ◆ Repeat for return or onward journey.

Monitoring:

- Use the Schedule Rules Audit tab and refresh.

3.7.2 C-ePOD Settings

EPOD settings on:

- Customer
 - ◆ EPOD Enabled ticked on EPOD Params tab
- Location Type - Default settings for locations of this type:
 - ◆ Send EPOD Job Load/Unload - tick to send the jobs at location stops of this type to ePOD
 - ◆ Consol EPOD Job Load/Unload - tick to consolidate the jobs at location stops of this type where the location is the same.
 - ◆ Send EPOD Dets Load/Unload - tick to send the item details of jobs at location stops of this type to ePOD
 - ◆ EPOD Job Group Load/Unload - tick to set a specific job group to EPOD for jobs at locations of this type.
- Location - override the defaults above from the EPOD tab:



- ◆ Send EPOD Job Load/Unload - tick to send the jobs at location stops of this type to ePOD
- ◆ Consol EPOD Job Load/Unload - tick to consolidate the jobs at location stops of this type where the location is the same.
- ◆ Send EPOD Dets Load/Unload - tick to send the item details of jobs at location stops of this type to ePOD
- ◆ EPOD Job Group Load/Unload - tick to set a specific job group to EPOD for jobs at locations of this type.
- Carrier
 - ◆ EPOD Enabled ticked
 - ◆ Auto Debrief Col set to "N". For customer-collect carriers, set this to "Y".
 - ◆ Auto Debrief Del set to "N". For customer-collect carriers and some 3rd-party carriers with no debrief process, set this to "Y".
 - ◆ Send to ePOD Col set to "Y"
 - ◆ Send to ePOD Del set to "Y".
- Carrier Group
 - ◆ If a different ePOD Site is required per carrier, set the EPOD Site here. Depends on System Parameters as to whether this is sent.
- Drivers
 - ◆ Set EPOD User.

A job is required for the sending of tasks to C-ePOD, and a webservice is required to pick up the updates.

There are also many system parameters controlling the function of EPOD - search for EPOD in the parameter name.

Name	Level	Description
EPOD_COMPLETE_ON_RTD	COST CENTRE	Complete Trip when RTD job sent back from epod
EPOD_CONSOLIDATION_LEVEL	COST CENTRE	Level of job consolidation for epod
EPOD_DEPOT_JOBS	SYSTEM	EPOD Debrief jobs which load at or deliver to RDC locations
EPOD_ENROUTE_COLLECTIONS	SYSTEM	Set Trip to En-Route via ePOD Interface
EPOD_JOB_GROUP_FORMAT	SYSTEM	Indicates whether the value passed in the EPL Job Group to EPOD is the Cost Centre (CC), Carried ID (CI), Customer Group (CG) or Customer (CU).
EPOD_SET_ACTUAL_SIGNATORY_BLANK	SYSTEM	Set EPOD actual signatory to blank (Y/N)?
EPOD_SITE_ID_FORMAT	SYSTEM	Indicates whether the value passed in the EPL Site ID to EPOD is the Database Name(DB), Cost Centre (CC), Carrier ID (CI) or Carrier Group (CA).
EPOD_VIEW_POD_URL	SYSTEM	URL for EPOD Documents
EPOD_WS_ADDRESS	SYSTEM	EPOD Web Service End Point
EPOD_WS_MESSAGE_FORMAT	SYSTEM	EPOD message format - can either be PARCEL or BULK to define where fields are sent in the web service message. MODE1 for LFS, MODE2 for general usage (NHSBT)
EPOD_WS_PASSWORD	SYSTEM	EPOD Web Service Login Password
EPOD_WS_TIMEOUT	SYSTEM	Number of minutes before a WS message will be set to Held
EPOD_WS_USERNAME	SYSTEM	EPOD Web Service Login Username

3.7.3 C-PORTAL TTM Settings

Predominantly against the customer.



Maintenance of business data functionality is used within C-TMS software to maintain data related to the business. The business data maintenance form can be accessed from the Maintenance Menu.

4.1 Group Names

Business Data Maintenance

BOM v2.8
C-TMS v11.1

Group Names Reason Codes Lair Reasons Trip Statuses Order Status... Surcharges Location T... Asset Ong. Time Zones Order Types

Group Name	Description	Consol Stops	Profit Margin
COLINDALE	Colindale Planning Group	☐	0.00
CAMBRIDGE	Cambridge Planning Group	☐	0.00
LEEDS	Leeds Planning Group	☐	0.00
SHEFFIELD	Sheffield Planning Group	☐	0.00
BIRMINGHAM	Birmingham Planning Group	☐	0.00
BRENTWOOD	Brentwood Planning Group	☐	0.00
MANCHESTER	Manchester Planning Group	☐	0.00
LANCASTER	Lancaster Planning Group	☐	0.00
LIVERPOOL	Liverpool Planning Group	☐	0.00
NEWCASTLE	Newcastle Planning Group	☐	0.00

New Group Edit Delete

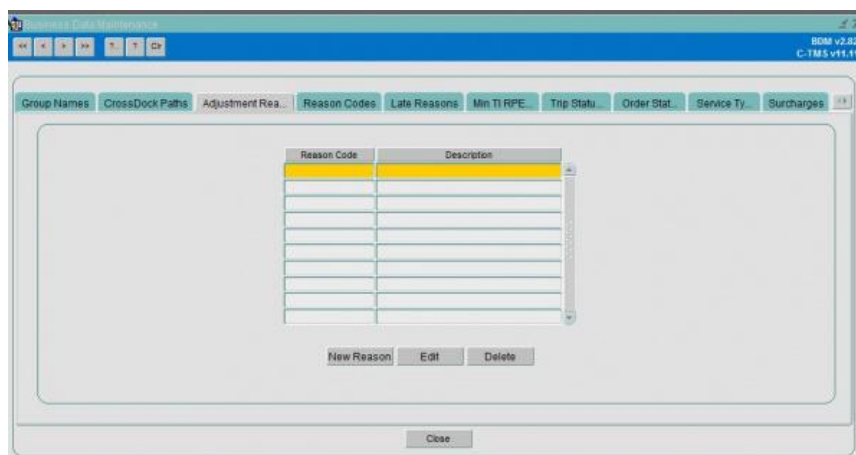
Close

4.2 CrossDock Paths

[illegible]

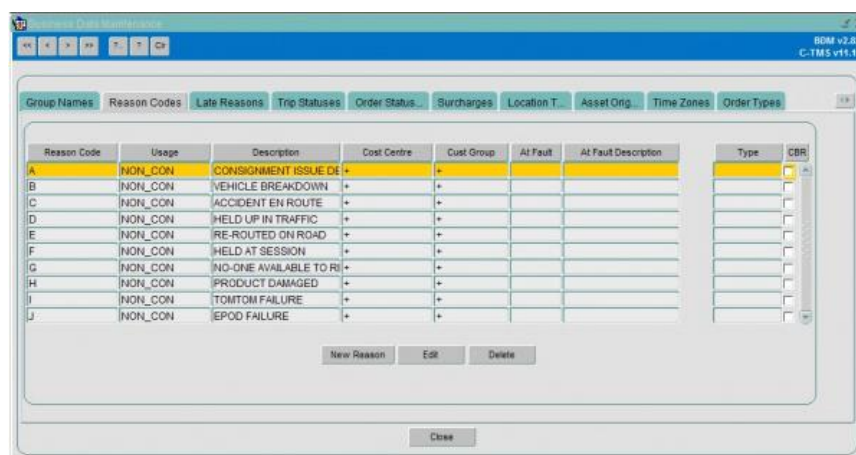
4.3 Adjustment Reason Codes

Provides a list of valid adjustment reason codes, an adjustment reason code can be selected when performing a Manual Advance.



4.4 Reason Codes

This tab displays a list of valid Reason Codes and their usage.



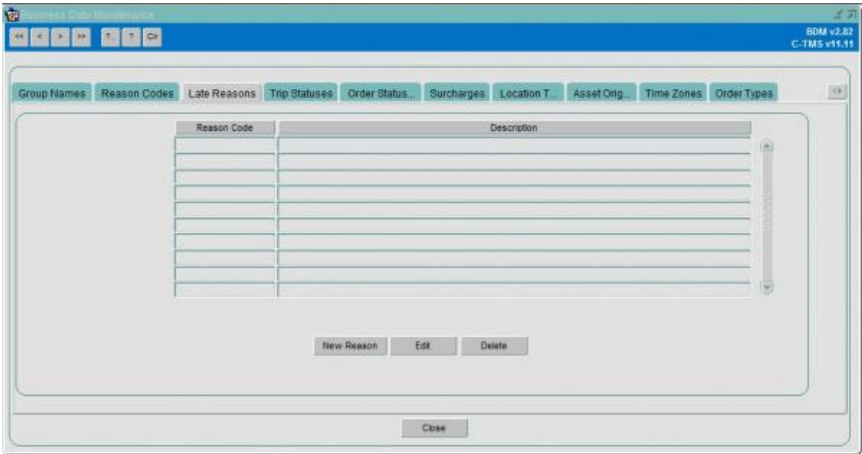
These codes can be used to record why a user has opted to perform a certain action, an example of this is when a user Reverses TI's they can enter the reason for the reversal. This table is now used to maintain non conformance codes for collections and deliveries.

If using Quarantine processing, you may set the action of new reason codes to "QUAR". This indicates that the reason code will add the item to quarantine, which may then be handled through the the [Quarantine Maintenance](#) screen.

4.5 Order Reason Codes

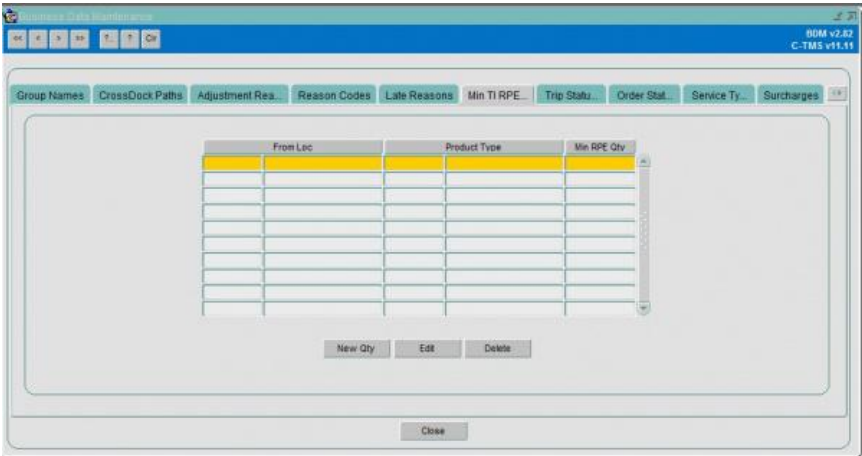
Displays a list of valid Order Reason Codes. These codes can be used in Trip Debrief to record a general order reason code e.g. for lateness.





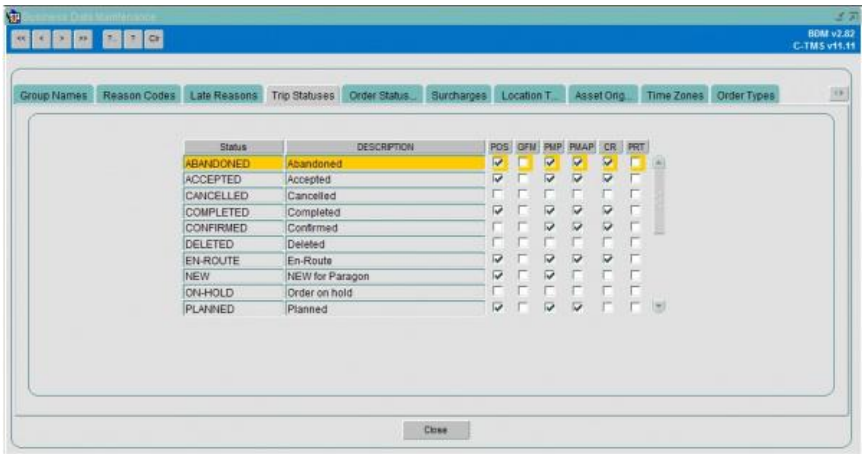
4.6 Min Ti RPE Quantity

Defines the minimum number of RPE's that should be placed on an order during Create TI's processing.



4.7 Trip Statuses

Displays a read only list of Trip status that are used within C-TMS, it also shows which options are set against a particular status, for example whether a carrier is required to set a Trip to a particular status.



4.8 Order Statuses

Displays a read only list of Order status that are used within C-TMS, it also shows which options are set against a particular status, for example Orders in that status can be Re-booked.

Status	DESCRIPTION	CSTM	CBR
ABORTED	Aborted	☒	☒
CANCELLED	Cancelled by user	☐	☒
CONSOLIDATED	Order consolidated onto a shipment	☐	☐
DELETED	Deleted by MTM (order does not exist on MTM schedule)	☒	☐
DELIVERED	Delivered - POO name exists for Unload at Destination Haulage	☐	☒
INVALID	Invalid (Order has not met required criteria)	☐	☐
LOADED	New order loaded into Orion from TOPL, unvalidated	☒	☐
NEW	New order in MTM	☒	☐
ON-HOLD	Order is on hold	☐	☐
QUEUED	Queued for MTM	☐	☒

The CSTM checkbox is ticked if orders of the status can be sent to MTM.

The CBR checkbox is ticked if orders of the status can be rebooked.

4.9 Service Types

Warning: This is an incomplete guide.

4.10 Surcharges

Fuel Surcharges are created on the Business Data Form's Surcharge tab. They specify a percentage surcharge to be calculated against all valid payments on a trip for an associated carrier whose fuel surcharge parameter date falls between the validity dates of the surcharge.

Trip level payments are flagged as subject to fuel surcharges on the Accounts Maintenance Form's Payments tab. Fuel Surcharges are viewed on the Payments Form and are calculated automatically by the ACC package at time of trip payment creation (either automatically from fixed routes etc, at time of status change or as Payments are raised manually (via Trip Summary / Finance tab etc)) regardless of whether or not there are manually rated payments on the trip (the other payments are not re-calculated if manual rating is detected).

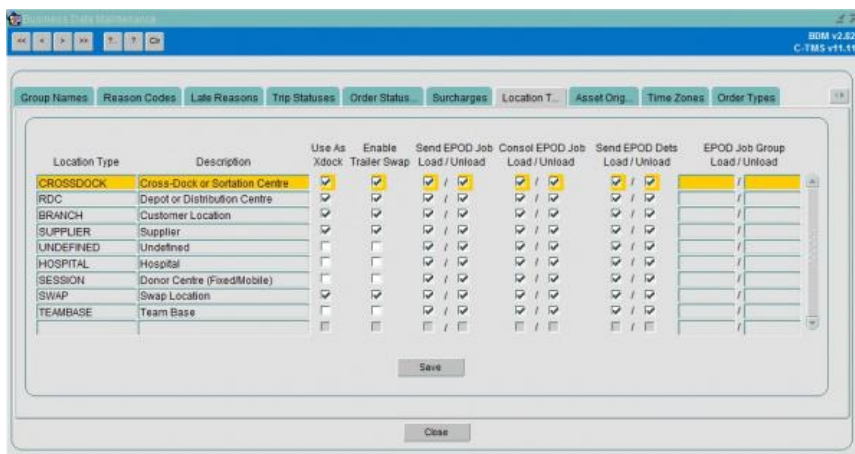


 Note:

- Access permissions to the Business Data Form have not changed. Only users with new function ACC_AMEND_FUELSURCHAR_PYTTYTYPE_STATUS are able to set payments to be surcharged.
- New adm_system_parameter ACC_FUELSURCH_EVENTDATE is used to indicate the trip date that will be used to check for a valid surcharge (either TRIPSTART or TENDERED date).
- The new fuel surcharging payment types are FUELSurch (trip level) and Fuel-Charge (order level).

4.11 Location Types

You can use this tab to maintain the location types associated with the business in the system. These are used when creating new locations in the Locations maintenance screen.



Location Type	Description	Use As Xdock	Enable Trailer Swap	Send EPOD Job Load/Unload	Consol EPOD Job Load/Unload	Send EPOD Dets Load/Unload	EPOD Job Group Load/Unload
CROSSDOCK	Cross-Dock or Sortation Centre	☒	☒	☒	☒	☒	☒
RDC	Depot or Distribution Centre	☒	☒	☒	☒	☒	☒
BRANCH	Customer Location	☒	☒	☒	☒	☒	☒
SUPPLIER	Supplier	☒	☒	☒	☒	☒	☒
UNDEFINED	Undefined	☒	☒	☒	☒	☒	☒
HOSPITAL	Hospital	☒	☒	☒	☒	☒	☒
SESSION	Donor Centre (Fixed/Mobile)	☒	☒	☒	☒	☒	☒
SWAP	Swap Location	☒	☒	☒	☒	☒	☒
TEAMBASE	Team Base	☒	☒	☒	☒	☒	☒

You can create the location type with a description.

You can then maintain some default criteria against the location type:

- **General**
 - ◆ Use as Xdock
 - ◆ Enable Trailer Swap
 - ◆ Inventory Managed
 - ◆ Optional Loc Usage
- **EPOD** - for use with the Aptean POD Calidus Edition system
 - ◆ Send Jobs Load/Unload - whether these jobs are sent to C-ePOD on this activity.
 - ◆ Consol Jobs Load/Unload - whether these jobs are automatically consolidated when sent to C-ePOD on this activity.
 - ◆ Send Dets Load/Unload - whether these jobs are sent with details (items) to C-ePOD on this activity.
 - ◆ EPOD Job Group Load/Unload - a specific job group to use when sending these jobs to C-ePOD on this activity.

4.12 XDock Paths

 **Warning:** This is an incomplete guide.

4.13 Paragon Staging Posts

Displays specified routes from/to with (via) Staging Post locations as supplied via a CSV data file from Paragon Data. The **imported** data from Paragon, may be supplimented, edited, or deleted via the use of the named buttons within the tab.



4.14 Delivery Method

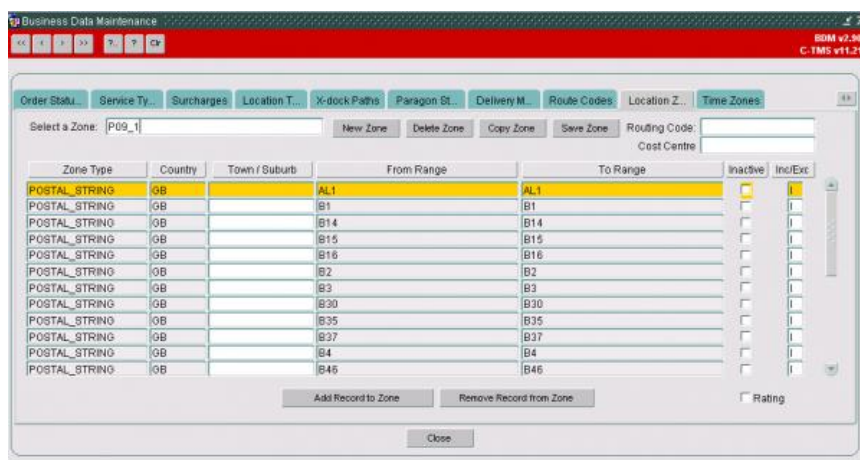
 **Warning:** This is an incomplete guide.

4.15 Route Codes

Superseded by Fixed Route Maintenance.

4.16 Location Zones

You can use this to maintain zones in the system.



Zone Type	Country	Town / Suburb	From Range	To Range	Inactive	Inc/Exc
POSTAL_STRING	GB		AL1	AL1	☐	I
POSTAL_STRING	GB		B1	B1	☐	I
POSTAL_STRING	GB		B14	B14	☐	I
POSTAL_STRING	GB		B15	B15	☐	I
POSTAL_STRING	GB		B16	B16	☐	I
POSTAL_STRING	GB		B2	B2	☐	I
POSTAL_STRING	GB		B3	B3	☐	I
POSTAL_STRING	GB		B30	B30	☐	I
POSTAL_STRING	GB		B35	B35	☐	I
POSTAL_STRING	GB		B37	B37	☐	I
POSTAL_STRING	GB		B4	B4	☐	I
POSTAL_STRING	GB		B45	B45	☐	I

Zones may be used by various areas of the system (e.g. fixed routes) to determine where the location is grouped together, and therefore how to route to it from another location.

A zone can be maintained here with the following information:

- Zone ID - a unique ID for this zone.
- Type - Defines what the range is of - one of:
 - ◆ Postcode
 - ◆ Planning Region
 - ◆ Postal Region
 - ◆ Country
 - ◆ Zone - a zone already defined in the system.
 - ◆ Postal String
 - ◆ Suburb
- Country
- Town/Suburb
- From Range
- To Range
- Inactive
- Inc/Exc - this flag indicates if the type of zone is being included or excluded from the location zone to enable greater flexibility to specify the delivery locations that are valid for the particular location zone.
- Customer
- Routing Code
- Cost Centre

 **Note:** When using Zones in the standard journeys for contracts, the system would have to look through all zones



created on the system for other purposes like scheduling engine. Rather than consider zones that have not been defined for Finance, you may set up zones based on the areas for charging and click the "Rating" flag - the contracts function only looks at these zones.

Location Zones may also be imported through **Imports**:

- **LOC_ZONES**

4.17 Asset Origins

This tab allows you to define the default location of assets belonging to customers.

Owner	Location Id	Def Loc
NHSBT	M4	
NHSBT	P1	
NHSBT	S1	
NHSBT	D1	
NHSBT	T2	
NHSBT	T3	
NHSBT	N1	
NHSBT	M1	
NHSBT	C1	
NHSBT	M2	

This is used only when using permanent asset tracking.

You can specify the customer (through a lookup), the location (through a lookup) and whether it is the default location for that customer.

4.18 Time Zones

This tab can be used to specify time zones used by the system to convert system dates and times into local dates and times. The business will need these to deal when planning and executing trips.

TZ Name	TZ Abbrev	DST Abbrev	UTC Offset	Daylight Saving

Type	DST Date

You can specify:

- TZ Name - the name e.g. Greenwich Mean Time
- Abbrev - an abbreviation e.g. GMT

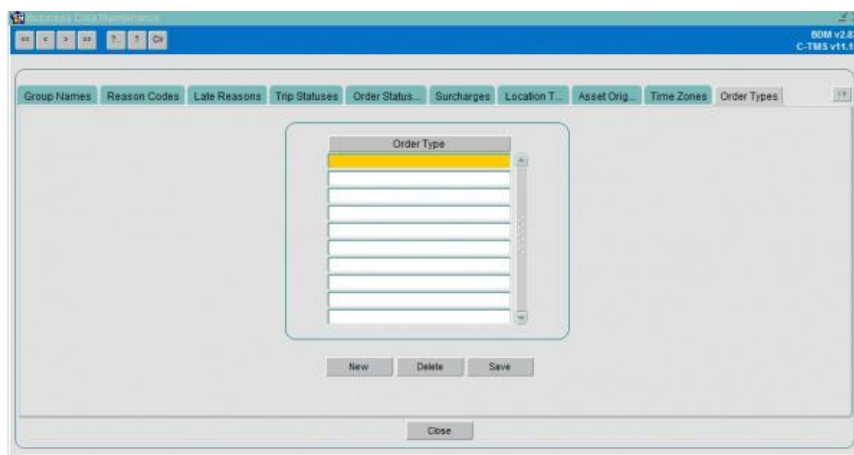


- DST Abbrev - an abbreviation of the daylight saving time for this time zone e.g. BST
- UTL Offset - the number of hours or minutes offset.
- Daylight Saving - whether daylight saving time is implemented in this time zone.
- Cost Centre - a lookup is provided.

For each time zone with daylight saving, you can also specify the start or end of the daylight saving time.

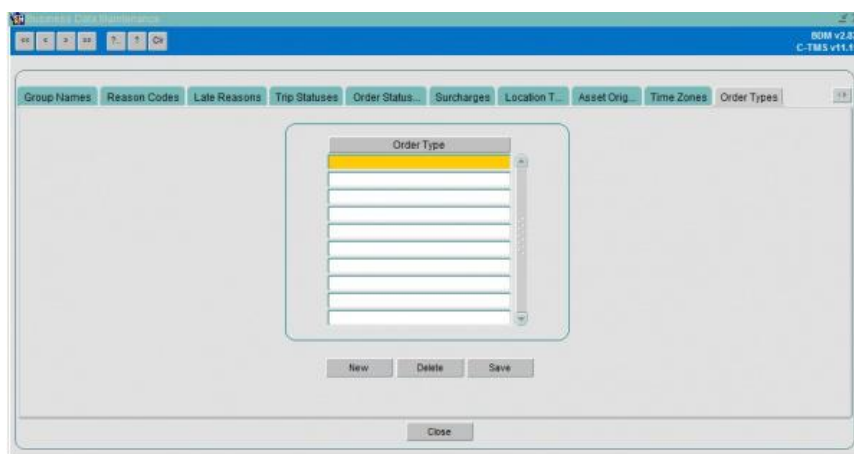
4.19 Order Types

This screen is used to maintain the different order types that exist within the business.



4.20 Service Levels

You can maintain service levels here.



You can enter:

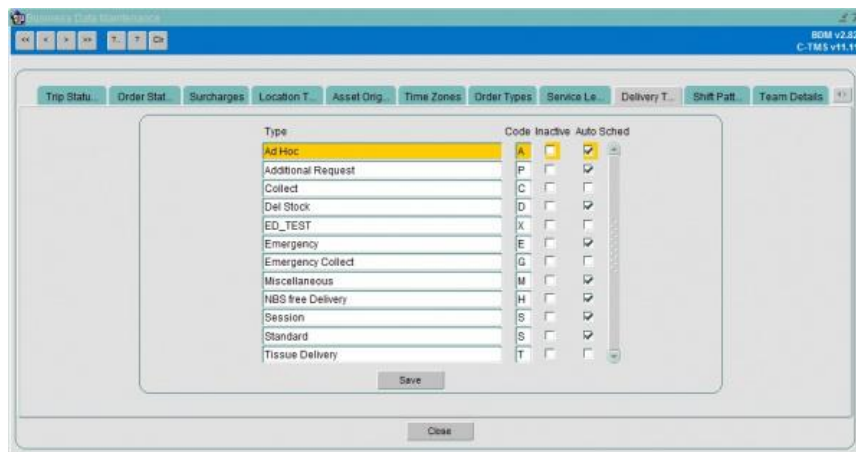
- Inactive
- Level
- Description
- Coll Offset
- Del Offset
- Early Col
- Late Col
- Early Del
- Late Del



These service levels settings will be used to default collection and delivery windows when orders are created with that service level.

4.21 Delivery Type

You can maintain delivery types here.



Delivery types are used against orders to group them, and are a critical part of order revenue generation from tariffs.

You can enter:

- Type
- Code
- Inactive
- Auto-Schec
- Do Not Rate
- Collect Saturday/Sunday
- Deliver Saturday/Sunday
- EPOD Mode - when using Aptean POD Calidus Edition (C-ePOD), and when configured to send different data by delivery type, this controls what mode to use i.e. how to map the data. A [List](#) of the mapping per type is available on Assist.

4.22 Transport Mode

You can maintain transport modes here. Transport modes are used by fixed route scheduling to determine whether an order should be scheduled onto a route (defined by the transport mode on the order and route)

You can enter the transport mode and description here.

4.23 Shift Patterns

You can maintain shift patterns on this tab on the Business Data Maintenance screen.



Business Data Maintenance BDM v2.82 C-TMS v11.11

Trip Statu... Order Stat... Surcharges Location T... Asset Orig... Time Zones Order Types Service Le... Delivery T... Shift Patt... Team Details

Depot M1

Depot	Depot Name	Shift Code	Shift Start	Shift End	Mon	Tue	Wed	Thur	Fri	Sat	Sun
M1	Manchester Blood Centre	MAN_S01_FRI	09:00	19:00							
M1	Manchester Blood Centre	MAN_S01_MON	09:00	19:00							
M1	Manchester Blood Centre	MAN_S01_THU	09:00	19:00							
M1	Manchester Blood Centre	MAN_S01_TUE	09:00	19:00							
M1	Manchester Blood Centre	MAN_S01_WED	09:00	19:00							
M1	Manchester Blood Centre	MAN_S02_FRI	13:30	23:30							
M1	Manchester Blood Centre	MAN_S02_THU	13:30	23:30							
M1	Manchester Blood Centre	MAN_S02_TUE	13:30	23:30							
M1	Manchester Blood Centre	MAN_S02_WED	13:30	23:30							
M1	Manchester Blood Centre	MAN_S03_FRI	14:00	23:30							
M1	Manchester Blood Centre	MAN_S03_MON	14:00	23:30							
M1	Manchester Blood Centre	MAN_S03_THU	14:00	23:30							
M1	Manchester Blood Centre	MAN_S03_TUE	14:00	23:30							
M1	Manchester Blood Centre	MAN_S03_WED	14:00	23:30							

Generate Shifts Display Shifts New Edit Delete Save Close

Shift patterns must be unique and are applied to a particular depot.

You can search for shifts for a depot, or see all.

To create a new shift press the **New** button. You can only create new shifts for the depots you are associated with.

To edit a shift press the **Edit** button. Only the days of the week and the times can be edited

You can enter:

- Depot
- Shift Code - Unique to the shift pattern.
- Shift Start - time
- Shift End - time
- Mon-Fri - checkboxes to which days of the week this shift applies.

To delete a shift press the **Delete** button. Validation exists to ensure that you cannot delete a shift that has drivers associated with it.

You can assign shifts to drivers using the Resources maintenance screen, or you can generate shifts for multiple drivers in this screen using the **Generate Shifts** button.



Business Data Maintenance

Depot: M1

Find

ID	Driver
0	HOSP Hospital own
11222245	Glynn Stansfield
11223323	Mark Hodgson
11225358	Thomas McVay
11228676	Peter Green
11229163	Patrick Nolan
11230268	Brian Stewart
11230466	Malcolm Parkes
11231004	Kenneth Smith
11231044	Alan Boardman
11231093	Stephen Trinder
11231334	David Shaw
11231436	Geoffrey Cragg
11232743	David Royle
11232848	Kevin Burgess

From:

To:

Shift:

Mon Tue Wed Thur Fri Sat Sun

Shift Start:

Shift End:

Duration Hrs: Mins:

Generate Shifts Close

You will be prompted to enter a shift for the depot from a lookup, as well as a from and to date. You can then select all of the drivers to whom you wish to apply this shift and click **Generate Shifts**.

Business Data Maintenance

Depot: M1

Find

ID	Driver
11222245	Glynn Stansfield
11223323	Mark Hodgson
11225358	Thomas McVay
11228676	Peter Green
11229163	Patrick Nolan
11230268	Brian Stewart
11230466	Malcolm Parkes
11231004	Kenneth Smith
11231044	Alan Boardman
11231093	Stephen Trinder
11231334	David Shaw
11231436	Geoffrey Cragg
11232743	David Royle
11232848	Kevin Burgess
12345678	Bob Hope

From: 03/11/2014

To: 03/11/2014

Shift: MAN_S01_MON

Mon Tue Wed Thur Fri Sat Sun

Shift Start: 09:00

Shift End: 19:00

Duration Hrs: 10 Mins: 00

Generate Shifts Close

Validation exists to check that a driver is not already on a shift. If this occurs a message appears for each driver that cannot be allocated to the shift. All other drivers will be allocated. Further validation exists to check that one of the days between the first and last days entered corresponds to a day that the shift is associated with. If this occurs a warning message is shown as below:

Forms

The shift pattern selected does not fall within the date range.

OK Cancel

Pressing the **OK** button will proceed to generate the shifts. Pressing the **Cancel** button will abandon the shift creation.

You can see all users assigned to a particular shift by pressing **Display Shifts**.



Business Data Management

Shifts

Depot: M1

Refresh Clear Search Criteria

Driver ID	Driver Name	Shift Code	From	To
11225358	Thomas McVay	MAN_S06_SUN	11:00	19:00
23570304	John Comerford	MAN_S12_SUN	06:00	18:00
23714522	Warren Lang	MAN_S11_SUN	18:00	06:00
11225358	Thomas McVay	MAN_S06_SAT	11:00	19:00
23570304	John Comerford	MAN_S12_SAT	06:00	18:00
23714522	Warren Lang	MAN_S11_SAT	18:00	06:00
11222245	Oliver Stansfield	MAN_S04_FRI	13:00	23:00
11225358	Thomas McVay	MAN_S06_FRI	13:00	21:00
11228676	Peter Craven	MAN_S02_FRI	13:30	23:30
11229163	Patrick Nolan	MAN_S01_FRI	09:00	19:00
11230268	Glan Stewart	MAN_S03_FRI	14:00	23:30
11230466	Malcolm Pakes	MAN_S10_FRI	08:00	17:30
11231044	Alan Boardman	MAN_S05_FRI	22:00	06:00
11231334	David Shaw	MAN_S07_FRI	08:00	18:30
11231436	Geoffrey Cragg	MAN_S08_FRI	06:00	15:00
11232743	David Royle	MAN_S14_FRI	07:00	15:30
11232848	Kevin Burgess	MAN_S13_FRI	10:00	20:00
23570304	John Comerford	MAN_S12_FRI	10:00	18:00

New Edit Delete Save Close

From this screen it is possible to change the search criteria to only bring back particular records. You can search on the driver, driver name, shift code and the from and to dates. Press the **Refresh** button to only bring back the records you are interested in. Press the **Clear Search Criteria** to bring back all records.

On this screen you have the following buttons

- **New** - this allows you to create a single record for a single driver.
- **Edit** - this allows you to edit a single record. Only the from and to dates can be changed.
- **Delete** - this allows you to delete a single or multiple records.
- **Save** - this saves any changes you have made.
- **Close** - closes the screen and returns to the shift patterns screen.

You can also import Shift Patterns and assign shifts to drivers through **Imports**:

- **SHIFT_PATT**
- **DRIVER_SHIFT**

4.24 Team Details

Note: This is specific to session collection functionality.

Business Data Management

Team Details

Depot: [Dropdown]

Team ID	Team Name	Post Code	Team Centre	Location Type	Transport	Receiving Depot	Mid Session	End Session	Validation Time	Cold	Normal	Hot
CL1	Hull	HU3 2BU	C1	TEAM BASE	C1	C1	C1	C1				
CL6	York	YO10 3DW	C1	TEAM BASE	C1	C1	C1	C1				
CL7	Leeds Donor Centre	LS15 7TW	C1	STATIC	TEAM	C1	TEAM	C1				
CL8	Bradford DC	BD1 3SH	C1	STATIC	C1	C1	C1	C1				
CL9	Leeds Headrow	LS1 5JX	C1	STATIC	C1	C1	C1	C1				
CLB	Bradford	BD1 3SH	C1	TEAM BASE	C1	C1	C1	C1				
CLE	Leeds East	LS15 7TW	C1	SHU	C1	C1	TEAM	C1				
CLW	Leeds West	LS15 7TW	C1	SHU	C1	C1	TEAM	C1				
DC1	Lincoln	LN9 6JW	D1	TEAM BASE	D1	D1	D1	D1				
DL1	Leicester DC	LE1 4SH	D1	STATIC	D1	D1	D1	D1				
DL2	Leicester	LE1 4SH	D1	TEAM BASE	D1	D1	D1	D1				
DN1	Nottingham DC	NG7 1FW	D1	STATIC	D1	D1	D1	D1				

New Edit Delete Save Close

Team master data will be created to link a team to a home depot for creating collection orders. The Team data including attributes to control the type of session that each team operates, whether the end session collection is required from transport, which depot the mid-session and end session collections should be delivered to and an optional validation period in minutes that that will control the planning for cold, normal and hot weather conditions.



If the related Team master data for a session record does not exist in C-TMS, the session record will be rejected by the interface validation functionality and not uploaded.

Session teams can be organised to run two or more different sessions concurrently. The team attributes controlling whether mid and end session collections and the depot (SHU or Manufacturing Centre) location derived from the team will apply to each and every session the team is assigned to.

As an optional entry, the Team Maintenance screen will allow an override validation period to be setup for cold, normal and hot ambient weather conditions. This will allow specific validation times for each team associated with sessions and will give NHSBT the flexibility to setup various operational scenarios, for example equipment at the sessions allows longer validation periods, or manufacturing needs a more regular 'trickle' of blood from sessions so the validation time is decreased.

You can use this tab to create Session teams.

You can select by Depot.

You can enter:

- Team ID
- Team Name
- Post Code
- Team Centre
- Location Type
- Mid Session details
 - ◆ Transport
 - ◆ Receiving Depot
- End Session details
 - ◆ Transport
 - ◆ Receiving Depot
- Validation Time
 - ◆ Cold
 - ◆ Normal
 - ◆ Hot

4.25 Storage Types

 **Warning:** This is an incomplete guide.

4.26 Note Types

You can maintain location note types in this tab. You can then use these to add notes against a location.

4.27 Fixed Costs By Route

You can use this tab to enter a fixed cost against a route for a particular customer.

4.28 Booking Status

This tab allows you to maintain the booking types in the system. These are predominantly used by the CTL Customer Services screen.



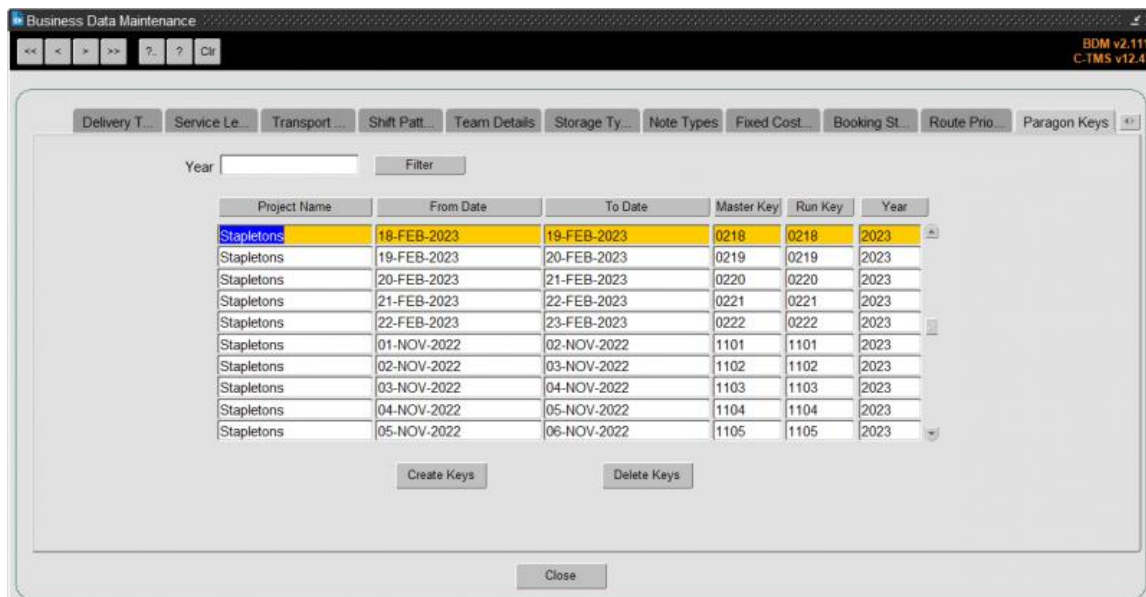
4.29 Route Priority

 **Note:** This is specific to the Paragon Route Master (Strategic) interface.

You can use this tab to enter rout codes, priorities and cust off times.

4.30 Paragon Keys

This tab allows you to maintain Paragon Run Keys.  **Note:** This is required when and specific to using the Paragon Routing and Scheduling system through an API.



Business Data Maintenance

BDM v2.111
C-TMS v12.47

Delivery T... Service Le... Transport... Shift Patt... Team Details... Storage Ty... Note Types... Fixed Cost... Booking St... Route Prio... Paragon Keys

Year Filter

Project Name	From Date	To Date	Master Key	Run Key	Year
Stapletons	18-FEB-2023	19-FEB-2023	0218	0218	2023
Stapletons	19-FEB-2023	20-FEB-2023	0219	0219	2023
Stapletons	20-FEB-2023	21-FEB-2023	0220	0220	2023
Stapletons	21-FEB-2023	22-FEB-2023	0221	0221	2023
Stapletons	22-FEB-2023	23-FEB-2023	0222	0222	2023
Stapletons	01-NOV-2022	02-NOV-2022	1101	1101	2023
Stapletons	02-NOV-2022	03-NOV-2022	1102	1102	2023
Stapletons	03-NOV-2022	04-NOV-2022	1103	1103	2023
Stapletons	04-NOV-2022	05-NOV-2022	1104	1104	2023
Stapletons	05-NOV-2022	06-NOV-2022	1105	1105	2023

Create Keys Delete Keys

Close



5 Static Data

The Static Data module encompasses the maintenance of static data used by the system.

The data can be viewed, created, edited and maintained through the accompanying Static Data Maintenance Maintenance form.

You can access the screen through the Maintenance menu.

5.1 Tabs

5.1.1 Region Data

This tab allows for the maintenance of region data:

Country Code	Postal Region	Planning Region	Alt Country Code
GB	A	SCO	
GB	AB	SCO	
GB	AL	LBZ	
GB	B	BRM	
GB	BA	BRI	
GB	BB	PRE	
GB	BD	PRE	
GB	BH	POM	
GB	BL	PRE	
GB	BN	KEN	
GB	BR	KEN	
GB	BS	BRI	

You can maintain the grouping of postal regions to planning regions.

Entries in this table control the setting of the 'Planning Region' against new locations. As new locations are created the Postal Region is set based on the Postcode stored against the address data.

The Postal Region can be dynamic based on the postcode format of the country - for the UK it takes the first 'character' based portion of the postcode e.g. L or BR.

The Postal Region from the location is then used to reference the matrix as entered in the Region Data tab and ascertain the correct Planning Region to store against the Location. It allows the grouping of one or more Postal Regions into a single Planning Region. An individual Postal Region cannot exist in more than one Planning Region.

The Planning Region can then be used in the planning process to filter the Order Well based on collection and delivery locations.

There are five buttons at the bottom of the screen:

- **New** - Allows you create a new region.
- **Delete** - Delete an existing region.
- **Cancel** - Do not save any changes.
- **Save** - Save any changes that you have made.
- **Radial Routing** - Edit Radial Routing. Here you can add the type of radial routing (Collection, Delivery, Both or None), and the location types that are affected by this rule. This is optional.



You can also import Region data through **Imports**:

- **REGION_DATA**

5.1.2 Region Depot

This tab allows for the maintenance of region depot data:

Planning Region	Depot	Group Name	Origin Port	Cost Centre	Priority
BAM	BAM			POLAR-CC	
BRM	BRM			POLAR-CC	
COA	COA			POLAR-CC	
EXE	EXE			POLAR-CC	
LBZ	LBZ			POLAR-CC	
LEE	LEE			POLAR-CC	
NEW	NEW			POLAR-CC	
POM	POM			POLAR-CC	
PRE	PRE			POLAR-CC	
SCO	SCO			POLAR-CC	
SWA	SWA			POLAR-CC	
ANG	ANG			POLAR-CC	

You can define the depots that are responsible for each planning region.

Entries in this table control two C-TMS functions:

- Scheduling Engine - identifying applicable Fixed Routes
- Order creation - setting the group name

Planning Region to Depot matrix - defines which planning region areas (and ultimately groups of location addresses) are under the control/responsibility of a particular depot. One or more Planning Regions can be added under the control of a particular depot. This is largely for the identification of applicable Fixed Routes in automatic planning.

Planning Region to Group Name matrix defines which Group Name should be stamped against an order during any none manual order creation (e.g. Specific EDI flows, Portal etc). The order locations are used to identify the Planning Region of the Collection/Delivery location and the appropriate Group Name is identified. This ultimately controls the order visibility in the Planning Well depending on the user parameter configuration.

There are four buttons at the bottom of the screen:

- **New** - Allows you create a new region depot.
- **Delete** - Delete an existing region depot.
- **Cancel** - Do not save any changes.
- **Save** - Save any changes that you have made.

You can also import Region Depot assignment data through **Imports**:

- **REGION_DEPOT**



5.1.3 Order Type

Warning: This is an incomplete guide.

The screenshot shows the 'Static Data Maintenance' window with the 'Order Type' tab selected. The window has a title bar with 'Static Data Maintenance' and a status bar with 'STATIC DATA MAINT v1.27' and 'C-TMS v12.45'. The main area contains a table with columns 'Order Type' and 'Send Ack'. Below the table are buttons for 'New', 'Delete', 'Cancel', and 'Save'. At the bottom of the window is a 'Close' button.

There are four buttons at the bottom of the screen:

- **New** - Allows you create a new order type.
- **Delete** - Delete an existing order type.
- **Cancel** - Do not save any changes.
- **Save** - Save any changes that you have made.

5.1.4 Booking Type

Warning: This is an incomplete guide.

The screenshot shows the 'Static Data Maintenance' window with the 'Booking Type' tab selected. The window has a title bar with 'Static Data Maintenance' and a status bar with 'STATIC DATA MAINT v1.27' and 'C-TMS v12.45'. The main area contains a table with columns 'Booking Type', 'Decode', 'Prod Type', 'DU Type', 'Cost Centre', and 'Customer'. Below the table are buttons for 'New', 'Delete', 'Cancel', and 'Save'. At the bottom of the window is a 'Close' button.

There are four buttons at the bottom of the screen:



- **New** - Allows you create a new booking type.
- **Delete** - Delete an existing booking type.
- **Cancel** - Do not save any changes.
- **Save** - Save any changes that you have made.

5.1.5 Order Terms

This tab allows you to maintain order terms. These are added to reports that support them.

Static Data Maintenance

STATIC DATA MAINT v1.27
C-TMS v12.45

Region Data Region Depot Order Type Booking Type **Order Terms** Location Group Name Report Terms Configuration

Ensure to take a new line for each Order Term using the Return key. No font formatting (bold/italic/boxed text) will be displayed on the report.
To convey important terms use BLOCK CAPITALS or put a dashed line before and after the term.

Terms

Last Updated Date Last Updated By

Cancel Save

Close

There are two buttons at the bottom of the screen:

- **Cancel** - Do not save any changes.
- **Save** - Save any changes that you have made.

5.1.6 Location Group Name

⚠ **Warning:** This is an incomplete guide.



The screenshot shows the 'Static Data Maintenance' window with the 'Location Group Name' tab selected. The window has a title bar with 'Static Data Maintenance' and a status bar with 'STATIC DATA MAINT v1.27' and 'C-TMS v12.45'. The main area contains a table with two columns: 'Group Name' and 'Location ID'. Below the table are four buttons: 'New', 'Delete', 'Cancel', and 'Save'. At the bottom of the window is a 'Close' button.

Group Name	Location ID

There are four buttons at the bottom of the screen:

- **New** - Allows you create a new location group name.
- **Delete** - Delete an existing location group name.
- **Cancel** - Do not save any changes.
- **Save** - Save any changes that you have made.

5.1.7 Report Terms Configuration

This tab allows you to maintain report terms. These are added to reports that support them.

The screenshot shows the 'Static Data Maintenance' window with the 'Report Terms Configuration' tab selected. The window has a title bar with 'Static Data Maintenance' and a status bar with 'STATIC DATA MAINT v1.27' and 'C-TMS v12.45'. The main area contains a 'Report' dropdown menu and a 'Report Title' text field. Below these are four text areas: 'Header Address', 'Supply Chain Address', 'Footer 1', 'Footer 2', 'Footer 3', and 'Footer 4'. At the bottom are four buttons: 'New', 'Delete', 'Cancel', and 'Save'. At the very bottom is a 'Close' button.

There are four buttons at the bottom of the screen:

- **New** - Allows you create new report terms.
- **Delete** - Delete existing report terms.
- **Cancel** - Do not save any changes.
- **Save** - Save any changes that you have made.



6 Order Entry Targets

Warning: This is an incomplete guide.

The Order Entry Target module is used to detail the actual collection and delivery windows on which an order should be collected or delivered.

The screenshot shows the 'Order Entry Target Details' window. The title bar includes 'ORD_ENTRY_TARGET v2.27' and 'MTS v10.5.0'. The window contains several input fields and buttons:

- Order No:** [Empty field]
- Oms Ref:** 994907
- Status:** INVALID
- Lookup...** button
- Site:** [Empty field]
- Isotrak Batch:** [Empty field]
- Cost Centre:** BURTACCOCC
- Customer:** ALCAN
- Delivery Type:** Standard
- Carrier:** Woolworths
- Schedule:** [Empty field]
- Group_Name:** [Empty field]
- Collect From:** HIGHGLAS (dropdown menu showing 'Glasgow_Highland Haulage_G21 2XQ')
- Collect Time:** 12/05/2009 00:00 (radio buttons for Target Time and Open Window)
- Deliver To:** BARTSCOT (dropdown menu showing 'Scotch Corner_Barton Services_DL10')
- Delivery Time:** 12/05/2009 00:00 (radio button for Target Time)
- Product:** AMBIENT
- DUs:** 26.000
- Volume:** 26.00
- Buttons:** New Order, Create Trip, Save, Close



7 Orders Interface

Warning: This is an incomplete guide.

An FTP process has been created to transfer Order information from a source system into **C-TMS**. The orders arrive in CSV files and are processed into **C-TMS** with errors being reported to a new **C-TMS** screen for manual administration by the users.

Interface Errors screen (a new tab will be added for each new interface).

Interface Id	Cost Centre	Customer	From Loc	To Loc	Sched Date	Early Avail	Late Avail	Early
RHE_110_A66_ORD000	GK_ORDER							
RHE_110_A66_ORD000	GK_ORDER							
RHE_110_A66_ORD000	GK_ORDER	GKHOMETRAI	EXELSTAN	BESTSOUT				
ISORDCRHE_000_MTE_UNISON_ORD		PZC	EXELWHIT	P88175001				
ISORDCRHE_000_MTE_UNISON_ORD		PZC	EXELWHIT	P88175001				
ISORDCRHE_000_MTE_UNISON_ORD		PZC	EXELWHIT	P88175001				
ISORDCRHE_000_MTE_UNISON_ORD		PZC	EXELWHIT	P88175001				
ISORDCRHE_000_MTE_UNISON_ORD		PZC	EXELWHIT	P88175001				
ISORDCRHE_000_MTE_UNISON_ORD		PZC	EXELWHIT	P88175001				
ISORDCRHE_000_MTE_UNISON_ORD		PZC	EXELWHIT	P88175001				

Include Duplicate Order records ? ☐

Detail Validation Error

ORDER interface record CRHE_110_A66_ORD00023897221060504_1.tbl is for MTS operation COFF.

Line No	Product Type	Du Type	Quantity	Qty In Cases	Weight	Cube

The Interfacing team should provide the interface data, extracting the necessary order data from the source system, constructing it into a **CSV** format consisting of a record header, order header and order detail or details lines and forward it to **C-TMS** where its arrival triggers an upload process. Each file contains exactly one order and is validated for structure on arrival to the server before invoking the appropriate **C-TMS** operation (DB) to process it.

The interface is designed to be generic. **C-TMS** reads the header to determine the interface type before channelling it for processing. The **CSV** format is extracted into interface order header and interface order details tables. Errors during this upload halt processing and result in the error being written to the tables for viewing in the **C-TMS** Interface Errors screen. If successfully extracted, the order is validated for loading into the **C-TMS** orders tables. Errors are written to the interface table for viewing and the order is rolled back. Successes are committed to the orders tables and are available for normal **C-TMS** orders / trip processing etc.

The FTP interface is one way (from an external source to **C-TMS**). Errors displayed on the error screen are administered manually via contact between **C-TMS** and external systems and will either result in data changes or a resend of a corrected FTP file. The FTP file name is used as the interface identifier (int_record_id) enabling order records, interface table records and files to be traced back to their origins.

7.1 Tesla Orders Details

Tesla Orders EDI files can be managed through the Tesla Orders tab on the Interface Errors screen.



Interface Errors

INT_ERR v1.120
C-TMS v11.47

Bookings DSG Tr... POD De... LOTS XML Or... XML Tr... PO Inb... PO Out... XML Ou... Unsche... BMW Or... Order ... Tesla ...

Search ☒ Include Success? Record Status: Successful Dealership: Case Id: Order Number: Delivery Date:

FileName	Stat...	Case Id	Dealer	Del Date	Order No	Carton Type	Carton Code	OMS	Created Date
15579495182811900_	S		3542590	12-AUG-25	1992940013	Single Roll	SML	4467025	12-AUG-2025
15121574675639409_	S		3000106145	11-AUG-25	1989480049	Double Roll	LRG	4466604	11-AUG-2025
15121574675639409_	S		3000106145	11-AUG-25	1989480049	Double Roll	LRG	4466604	11-AUG-2025
15568234824529420_	S		3000629091	11-AUG-25	1989500013	Single Roll	SML	4466603	11-AUG-2025
15121574675639409_	S		3000070989	11-AUG-25	1989460013	Bulk Item	INF	4466596	11-AUG-2025
15121574675639409_	S		3000106144	11-AUG-25	1989470024	Double Roll	INF	4466597	11-AUG-2025
15121574675639409_	S		3000106144	11-AUG-25	1989470024	Bulk Item		4466597	11-AUG-2025

Error Message

Re-Process

Tesla Order Ref	Line Number	Item Number	Item Qty	Hazardous Material	
FO-200569288	1061353-00-G	3	3	1	false
FO-181023774	1068130-01-B	24	24	1	false
FO-188216419	1091472-00-B	15	15	1	false
FO-213471678	1110298-00-D	52	52	11	false
FO-165188940	1127502-11-D	26	26	1	false

Close Action

You can search using the header fields:

- Include Success - a checkbox - by default the screen only includes failures.
- All other criteria are drop-down lists:
 - ◆ Record Status
 - ◆ Dealership
 - ◆ Case Id
 - ◆ Order Number
 - ◆ Delivery Date

The screen displays:

- Filename
- Status - S or F
- Case Id
- Dealer
- Del Date
- Order No
- Carton Type
- Carton Code
- OMS
- Created Date

You can sort the results by any of these columns.

Select a record on this results table and further information will be shown below:

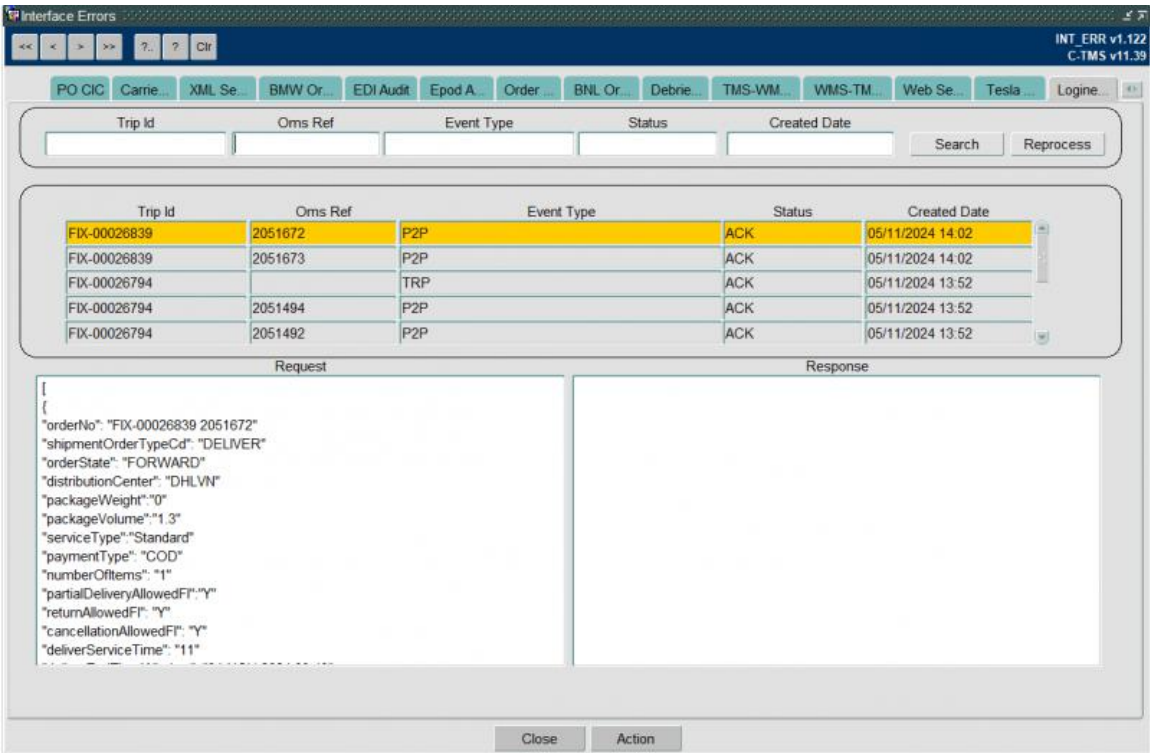
- Error message - any associated errors whilst processing the file
- Pallet/Case Details:
 - ◆ Tesla Order Number
 - ◆ Line Number
 - ◆ Item Number
 - ◆ Item Qty
 - ◆ Hazardous Material - indicator whether the material is hazardous.

If the record is failed, you can reprocess it with the **Re-Process** button.



7.1.1 LogiNext Details

This tab shows the interface messages and details of any messages to LogiNext systems.



The screen will display the details of all records from the new LogiNext audit detail described above.

You can filter the search using the search criteria in the top of the tab page and clicking **Search**.

You can reprocess the currently highlighted record by pressing the **Reprocess** button, this will then invoke the reprocessing function

Only failed outbound messages will be available to be reprocessed and an error will be shown if any other type of record is selected for reprocessing.

 **Note:** You will not be able to edit data in this screen any errors with trips should be rectified in the planning screen.



8 Scheduling Engine

The scheduling engine is an automated process that will select unscheduled orders and apply them to the available trips or create new trips as required based on the routes that exist.

The fixed routes (for own fleet) and the carriers routes (for external carriers but also for own fleet parcel services) will be assessed based on rules to schedule the orders.

8.1 System Parameters

- 'AUTO_SCHEDULING'

A cost centre parameter that controls which orders are considered by the scheduling engine, the parameter must be set to 'Y' for the cost centre of the order for the order to be scheduling automatically.

- 'ENGINE_RUNNING'

A cost centre parameter which will be set automatically to 'Y' by the schedule engine process when the process is being run for the database.

This system parameter will be set back to 'N' by the process once all of the available orders have been processed.

- 'MAINTAIN_SCHEDULE_DATES'

A cost centre parameter which will control if the order time windows will be derived for the 'XML' and 'CSV' orders.

The system parameter must be set to 'Y' for the cost centre of the order to be active.

- 'TRIP_PREVENT_PARCEL_CARRIER_ASSIGNMENT'

A cost centre parameter which will control if orders can be planned manually to a trip for a 'Parcel' carrier.

The system parameter must be set to 'Y' for the cost centre of the order to be active.

- 'TRIP_VALIDATE_PARCEL_ORDER_ASSIGNMENT'

A cost centre parameter which will control if orders are validated when they are planned manually to a trip for a 'Parcel' carrier.

The system parameter must be set to 'Y' for the cost centre of the order to be active.

- 'TRM_3PL_REROUTE'

A system parameter that can be set to 'Y' to enable the functionality in the Fixed-Drop Scheduling engine to plan the orders to the next available route.

- 'TMP_ENG_TRIP_PREFIX'

A system parameter that controls the prefix that the trips created from fixed drop scheduling drops will be prefixed with e.g. TMP, MAN, RTE etc.

If the trips are to be replanned by Paragon, set this to TMP. If the trips are not to be replanned, then set this to RTE (or some other easily recognizable prefix).

8.2 Scheduling Engine Control

The scheduling engine may be defined in the 'Scheduling Maintenance' screen.

To use the screen, the user must be logged in as 'EDI_OWNER' so that the process is started with the correct level of access control.



The screen allows users to start and stop the scheduling engine and select which functionality runs and the sequence in which the different aspects of the scheduling engine are run.

Note that if a process is not ticked as being 'Included' IT WILL NOT BE RUN.

The 'Audit' tab page will record each successful completion of the scheduling engine and will also display any errors which occurred during the processing of the orders.

The audit does not record why an order failed to schedule (because it would have to record why it failed to schedule with every route available).

There are different processes that the scheduling engine can use - 'Parcel Carriers', '3PL Carriers', 'Wholesale Schedule', 'Mandated Carriers', 'Top Up Process', 'Network Schedule' and 'NHSBT Schedule':

Scheduling Process	Included	Run Order	Incl On Cust Drop	Unplanned Order Email
Mandated Carrier	☒	1	☒	☐
Parcel Carriers	☒	2	☒	☐
Wholesale Schedule	☐	3	☐	☐
3PL Carriers	☐	4	☐	☐
Baxter Trunks	☐	5	☐	☐
Top Up Process	☒	6	☒	☐

Start Scheduling Engine [] minutes

Stop Scheduling Engine []

New Delete Save Close

The 'Run Order' can be specified to the sequence in which each type of scheduling engine process will be run so that certain types of orders and carriers can be assessed preferentially.

In this example, the 'Mandated Carrier' process will be run first.

8.3 Customer Settings

- 'Exclude From Scheduling Engine'

Customers must be actively excluded from the scheduling engine if they do not want to have their orders scheduled automatically:



- 'Carrier Preferences'

The carrier must exist as a preferred carrier for the customer of the order if the customer has a list of carriers that it will accept for the delivery of its orders:

In this example, the 'POL' carrier will be assessed first and if that carrier cannot take the order, the 'TBD' carrier will be assessed next.

Note that if a customer has no preference, the orders for that customer may be delivered by any carrier without preference.

- 'Scheduling Threshold'

A threshold value may be set to exclude the order from the scheduling engine until a set period of time prior to its early delivery date and time:



The number of minutes may be specified and a value of '0' will indicate that the order cannot be scheduled automatically in the particular aspect of the scheduling engine until the early delivery date and time has been reached by the system date and time (i.e. in the local time zone).

Note that if a threshold value is not specified that the order will effectively be valid for the aspect of the scheduling engine to process once it has been created, validated and set to 'UNSCHEDULED' status.

8.4 DU Category

The DU category can be specified to denote the type of despatch unit for planning purposes:

DU Type	DU Description	DU Category	Volume	Vol Collapsed	Max KG	RPE	Priority	AVG VMT	Decimals	No Re-Calc	Owned Pack
4WAY	4 Way Pallet (GKN)	PALLET				1.2500			☒	☐	☐
A1	EURO A GRADE	PALLET				1.0000			☐	☐	☐
A2	Delete					1.0000			☐	☐	☐
AH14	AH14	PALLET				1.2500			☒	☐	☐
AH1E	AH1E	PALLET				1.0000			☒	☐	☐
AH24	AH24	PALLET				1.2500			☒	☐	☐
AH2E	AH2E	PALLET				1.0000			☒	☐	☐
AHC4	AHC4	PALLET				1.2500			☒	☐	☐
AHCE	AHCE	PALLET				1.0000			☐	☐	☐
AHDF	AHDF	PALLET				1.0000			☐	☐	☐
AUKG	AUKG	PALLET				1.2500			☐	☐	☐
B1	EURO B GRADE	PALLET				1.0000			☐	☐	☐
BOX	SMALL	PARCEL				0.0200			☒	☐	☐

A DU category of 'PALLET' indicates that it is a pallet that would normally be transported by own fleet.

A DU category of 'PARCEL' indicates that it is a parcel that would normally be transported by a parcel carrier service by own fleet or by an external 'PARCEL' carrier.

Note that a DU type will have a DU category of 'PALLET' by default unless stated otherwise.

The DU category of an order will be set to 'PARCEL' based on the presence of a DU type having a DU category of 'PARCEL'.



The DU category will then be used to decide which set of routes (fixed for 'PALLET' or carrier for 'PARCEL') to check for the derivation of the order time windows when the orders are created via the 'XML' and 'CSV' files.

Note that some 'PARCEL' carriers will be able to take 'PALLET' items should they be setup to do so in the 'Carrier Rules' screen for the DU types.

8.5 Carrier Type

The 'Carrier Type' will determine the scheduling engine process in which that carrier will be assessed:

Resource Maintenance

RESOURCE v2.164
C-TMS v11.21

Carriers Carrier Groups Carrier Lanes Carrier Types Fixed Charges Service Types Trailer Types Trailers Drivers Loc Prd Conv Despatch Unit Types

Active Inactive All

Carrier ID	Name	Group	Carrier Ty...	Haul Unit	Hub Loc	StartEnd Hub Hub	BC Type	TMS Ref	HQ Loc	Exp Type	VAT No	MS	TT	SS	SF	OTF	Alt Mul Car Ter	IA	E/D
TEK	TEK Freight	Hauliers	Haulier																
247	247	Hauliers	Haulier																
FET	FEK	Hauliers	Haulier																
PHAR GO	Phar Go	Hauliers	Haulier		DHLCHE														
CRISIS	CRISIS	Hauliers	Haulier		DHLCHE														
QUIKSTAT	Quikstat	Hauliers	Haulier																
CRISIS GPG	Crisis Groupage	Hauliers	Haulier		DHLCHE														
TBD	TBD	Hauliers	PARCEL																
DHL Express	DHL Express	Hauliers	PARCEL		DHLBACT														
POL	Polar Speed	Hauliers	PARCEL																
UPS	UPS	Hauliers	PARCEL																
DHLDRY	DHL (DRY ICE) A	Hauliers	PARCEL																
YOD	Yodel	Hauliers	PARCEL																
DHLLSVAN	DHLLSVAN	PARCEL	PARCEL	10	DHLCHE				DHLCHE										
PAR	Parcelforce	Hauliers	PARCEL																
MOV	Movianto	Hauliers	PARCEL																
CHE	CHE (Holding)	Hauliers	PARCEL																
CitySprintSD	City Sprint Same	Hauliers	PARCEL		DHLBACT														
SAM	Sameday	Hauliers	PARCEL																
DHLTD	DHL TD EXPRESS	Hauliers	PARCEL																

New Carrier Contacts Edit Delete

The 'Carrier Type' may be '3PL' or 'PARCEL' to apply the specific scheduling engine process.

8.6 Carrier Formats

Different formats can be setup for each carrier:



Resource Maintenance

RESOURCE v2.164
C-TMS v11.21

RPE Cust Load Rates Tractors Vessels Carrier Routing Carrier Formats Carrier Tracking Carrier Config Vehicles Own Charges Carrier Format...

Type Refresh

Type	Format	Print Total on Label	Current Version	Activation Date	Delete Version
Label	DHLStandard1				
Label	DHL_Express2		84	05-MAR-2016 10:25:26	
Label	Movianto	Y		11-DEC-2014 08:25:34	
Label	DHL_Express	Y	84	03-MAY-2013 13:29:00	
Label	Parcelforce	Y			
Label	Polarspeed	Y	25	29-JUL-2016 17:04:38	
Label	DHL_Penguin1				
Label	Standard1	Y			
Label	Yodel	Y	130	27-FEB-2015 10:43:57	
Manifest	DHL_Express				
Manifest	Yodel				
Manifest	Movianto				
Manifest	Standard1				
Manifest	Standard2				

New Save Delete

The current version of the gazetteer data can be stored for the label format.

The label format can be assigned to a routing format to obtain the gazetteer data:

Resource Maintenance

RESOURCE v2.164
C-TMS v11.21

RPE Cust Load Rates Tractors Vessels Carrier Routing Carrier Formats Carrier Tracking Carrier Config Vehicles Own Charges Carrier Format...

Type	Format	Routing Format
Label	DHLStandard1	DHLStandard1
Label	DHL_Express	DHL_Express
Label	DHL_Express2	DHL_Express
Label	DHL_Penguin1	DHL_Penguin1
Label	Movianto	Movianto
Label	Parcelforce	Parcelforce
Label	Polarspeed	Polarspeed
Label	Standard1	Standard1
Label	Yodel	Yodel
Manifest	DHL_Express	DHL_Express
Manifest	Movianto	Movianto
Manifest	Standard1	Standard1
Manifest	Standard2	Standard2
Manifest	Yodel	Yodel

New Save Delete

The carrier can be configured to have a label format and a manifest format:



Resource Maintenance

RESOURCE v2.164
C-TMS v11.21

RPE Cust Load Rates Tractors Vessels Carrier Routing Carrier Formats Carrier Tracking Carrier Config Vehicles Own Charges Carrier Format...

Carrier: DHLTD DHL TD EXPRESS Refresh

Label Format: DHL_Express2 Manifest Format: DHL Express Print Manifest: Y Vol Factor (Kgm3):

Print Shipment Label: N

Location	Customer	Schedule Number	Account Number	Contract Number	Shipment Tracking Ref	Unit Tracking Ref
DHLLUTT	DEX		186227040		DHLTD_AWB_Sh	DHLTD_LPN_DU
DHLLUTT	HAE		186227079		DHLTD_AWB_Sh	DHLTD_LPN_DU
DHLLUTT	GLM		186226823		DHLTD_AWB_Sh	DHLTD_LPN_DU
DHLLUTT	FER		186461437		DHLTD_AWB_Sh	DHLTD_LPN_DU
DHLLUTT	SOR		186470772		DHLTD_AWB_Sh	DHLTD_LPN_DU
DHLLUTT	SET		185411637		DHLTD_AWB_Sh	DHLTD_LPN_DU
DHLCHER3	SER		186227095		DHLTD_AWB_Sh	DHLTD_LPN_DU
DHLCHER3	ACV		186226500		DHLTD_AWB_Sh	DHLTD_LPN_DU
DHLCHER3	ALG		185948672		DHLTD_AWB_Sh	DHLTD_LPN_DU
DHLCHER3	NOR		186144103		DHLTD_AWB_Sh	DHLTD_LPN_DU
DHLCHER3	CPK		186692417		DHLTD_AWB_Sh	DHLTD_LPN_DU
DHLCHER1	ARR		186226034		DHLTD_AWB_Sh	DHLTD_LPN_DU

New Save Delete

The physical manifest can also be requested to be printed automatically when the trip is despatched.

The tracking references can be applied by customer by depot.

The tracking references can be updated with a range of values for the carriers:

Resource Maintenance

RESOURCE v2.164
C-TMS v11.21

RPE Cust Load Rates Tractors Vessels Carrier Routing Carrier Formats Carrier Tracking Carrier Config Vehicles Own Charges Carrier Format...

RefType Refresh

Ref Type	Tracking Level	Prefix	Check Digit Function	Check Digit	Start	End	Next
CHE_DU	Shipment			6	1	999999999	219806
CITY_DU	Shipment			1	1	999999999	1
DHLCHER	Shipment	DHLCHER		6	1	999999	1287
DHLTD_AWB_Sh	Shipment		Standard1 (MOD7)	4	469100000	469144999	469128531
DHLTD_LPN_DU	DU	JD0002263200	Standard1 (MOD7)	3	1	500000	289411
DHL_AWB_NEW	Shipment		Standard1 (MOD7)	1	990597000	990641999	990597000
GLAV_Shpt	Shipment	GLAV	Standard1 (MOD7)	4	100000	499999	159002
PAR1_Shpt	Shipment	YD	Parcelforce	6	50000	149999	67223
PAR3_OLD	Shipment	YE	Parcelforce	6	400000	499999	400000
PAR3_Shpt	Shipment	GW	Parcelforce	7	10000	109999	81800
PEN_DU	DU	PEN	Standard1 (MOD7)	5	1	999999999	21467
POL_DU	DU	DHL	Standard1 (MOD7)	5	10000000	20000000	10476541
POL_Shpt	Shipment	CON	Standard1 (MOD7)	0	10000000	20000000	10384507
SAM_DU	DU	SAME		2	1	999999999	9921
TBD_Shpt	Shipment			5	1	999999999	5612

New Save Delete

8.7 Carrier Gazetteer

The gazetteer data can be imported for each carrier for the latest version to be applied:



Resource Maintenance

RESOURCE v2.164
C-TMS v11.21

RPE Cust Load Rates Tractors Vessels Carrier Routing **Carrier Formats** Carrier Tracking Carrier Config Vehicles Own Charges Carrier Format...

Label Format: DHL_Express Country Code: GB From Postcode: To Postcode: Refresh

Version: 84 Sortation Hub: Depot: Direction: Town:

Label Format	Version	Country Code	Country Name	From Postcode	To Postcode	Town	Sortation Hub
DHL_Express	84	GB	United Kingdom	AB10	AB10	ABERDEEN	ABZ
DHL_Express	84	GB	United Kingdom	AB10	AB10	BRIDGE OF DEE	ABZ
DHL_Express	84	GB	United Kingdom	AB11	AB11	ABERDEEN	ABZ
DHL_Express	84	GB	United Kingdom	AB11	AB11	TORRY	ABZ
DHL_Express	84	GB	United Kingdom	AB12	AB12	PORTLETHEN	ABZ
DHL_Express	84	GB	United Kingdom	AB12	AB12	MARYCULTER	ABZ
DHL_Express	84	GB	United Kingdom	AB12	AB12	WEST TULLOS INDUS	ABZ
DHL_Express	84	GB	United Kingdom	AB12	AB12	ALTENS	ABZ
DHL_Express	84	GB	United Kingdom	AB12	AB12	BRIDGE OF DEE	ABZ
DHL_Express	84	GB	United Kingdom	AB12	AB12	BADENTON INDUSTRIA	ABZ
DHL_Express	84	GB	United Kingdom	AB12	AB12	ABERDEEN	ABZ
DHL_Express	84	GB	United Kingdom	AB12	AB12	COVE BAY	ABZ
DHL_Express	84	GB	United Kingdom	AB12	AB12	COVE	ABZ
DHL_Express	84	GB	United Kingdom	AB12	AB12	ARDOE	ABZ
DHL_Express	84	GB	United Kingdom	AB12	AB12	BLAIRS	ABZ

New Save Delete

The carrier routing data will be used for the production of the carrier labels and this data should be used to specify the carrier rules for ensuring that the orders are scheduled correctly.

Note that this data is not used in the scheduling engine or the derivation of the order time windows.

8.8 Carrier Rules

The carrier rules will apply to the assessment of the parcel carriers:

- Shipment Size

Carrier Rules Maintenance

CARRIER RULES v1.9
C-TMS v11.21

Carrier Rules Shipment DU Type Product Type **Carrier Routes Services**

Carrier Id	Ship Min Wt	Ship Max Wt	Ship Min Vol	Ship Max Vol
CHE	0.00	100000.00	0.00	999999.00
CitySprintSD	0.00	500.00	0.00	9999.00
DHLCHER	0.00	10000.00	0.00	99999.00
DHLDRY	0.00	500.00	0.00	9999.00
DHLLSVAN	0.00	10000.00	0.00	9999.00
DHLLSVAN2	0.00	10000.00	0.00	9999.00
DHLLUTT	0.00	10000.00	0.00	99999.00
DHLTD	0.00	100000.00	0.00	999999.00
MOV	0.00	500.00	0.00	9999.00
PAR	0.00	500.00	0.00	9999.00
POL	0.00	550.00	0.00	9999.00
SAM	0.00	10000.00	0.00	9999.00

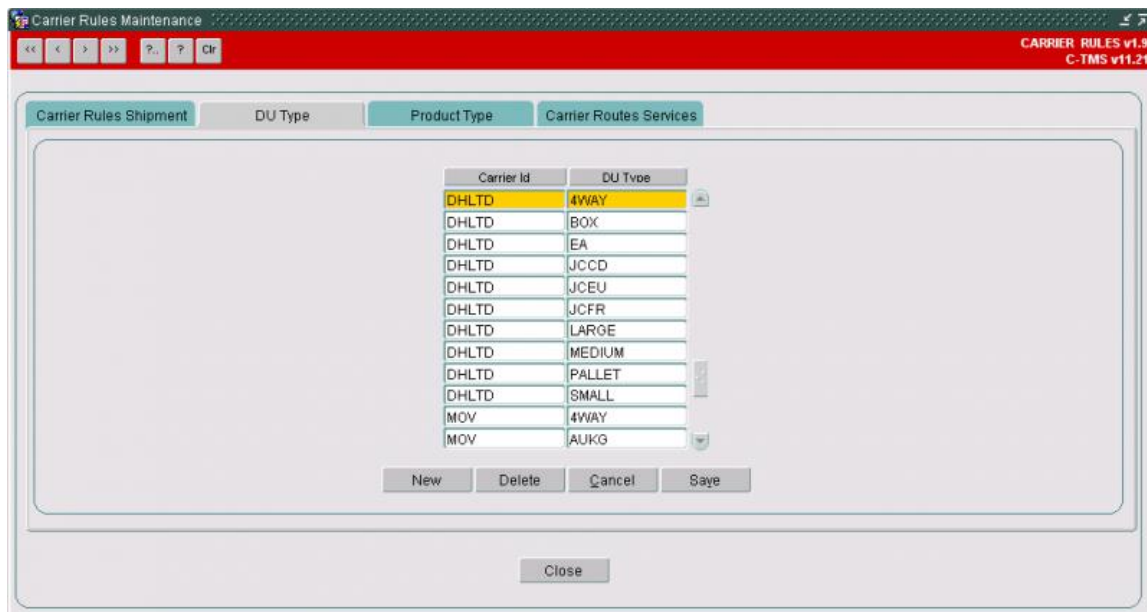
New Delete Cancel Save

Close

The carrier must be able to transport the size of the shipment (i.e. based on the total for the order) based on the weight and the volume.

- DU Type





Carrier Rules Maintenance

CARRIER RULES v1.9
C-TMS v11.21

Carrier Rules Shipment | DU Type | Product Type | Carrier Routes Services

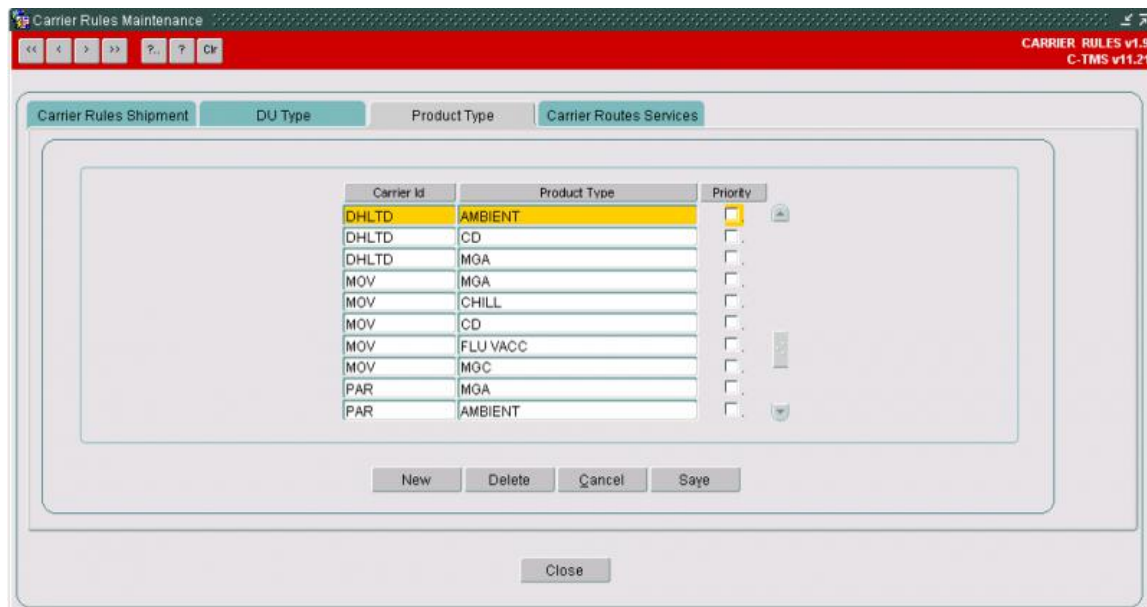
Carrier Id	DU Type
DHLTD	4WAY
DHLTD	BOX
DHLTD	EA
DHLTD	JCCD
DHLTD	JCEU
DHLTD	JCFR
DHLTD	LARGE
DHLTD	MEDIUM
DHLTD	PALLET
DHLTD	SMALL
MOV	4WAY
MOV	AUKG

New Delete Cancel Save

Close

The carrier must be able to transport the DU types that exist for the order lines (as packed and despatched).

- Product Type



Carrier Rules Maintenance

CARRIER RULES v1.9
C-TMS v11.21

Carrier Rules Shipment | DU Type | Product Type | Carrier Routes Services

Carrier Id	Product Type	Priority
DHLTD	AMBIENT	☒
DHLTD	CD	☐
DHLTD	MGA	☐
MOV	MGA	☐
MOV	CHILL	☐
MOV	CD	☐
MOV	FLU VACC	☐
MOV	MGC	☐
PAR	MGA	☐
PAR	AMBIENT	☐

New Delete Cancel Save

Close

The carrier must be able to transport the product types that exist for the order lines (as packed and despatched).

- Service Level



Carrier Rules Maintenance

CARRIER RULES v1.9
C-TMS v11.21

Carrier Rules Shipment DU Type Product Type Carrier Routes Services

Carrier ID	Route Code	Route Name	Trailer Type	S	M	T	W	T	F	S	Max trips	Inacti...
DHLTD	DHLTD_CH1_1	DHL EXPRESS (EMA) CHER 1	CARRIER MIX	☐	☒	☒	☒	☒	☒	☒	5	☐
DHLTD	DHL_LUT_SAT	DHL EXPRESS (EMA) LUTT SAT	CARRIER AMB	☐	☒	☒	☒	☒	☒	☒	5	☐
DHLTD	DHLTD_C1_SAT	DHL EXPRESS (EMA) CHER 1 SAT	CARRIER MIX	☐	☐	☐	☐	☐	☒	☒	10	☐
DHLTD	DHLTD_RTLUT1	DHL EXPRESS (OXF) LUTTERWORTH	CARRIER AMB	☐	☒	☒	☒	☒	☒	☒	5	☐
DHLTD	DHLTD_CH3_1	DHL EXPRESS (EMA) CHER 3	CARRIER MIX	☒	☒	☒	☒	☒	☒	☒	10	☐
DHLTD	DHLTD_RTLUT2	DHL EXPRESS (EMA) LUTTERWORTH	CARRIER AMB	☒	☒	☒	☒	☒	☒	☒	5	☐
DHLTD	DHLTD_CH1_2	DHL EXPRESS (OXF) CHER 1	CARRIER MIX	☐	☒	☒	☒	☒	☒	☒	5	☐
DHLTD	DHLTD_CH3_2	DHL EXPRESS (OXF) CHER 3	CARRIER MIX	☒	☒	☒	☒	☒	☒	☒	5	☐
DHLTD	DHLTD_C3_SAT	DHL EXPRESS (EMA) CHER 3 SAT	CARRIER MIX	☐	☐	☐	☐	☐	☒	☒	10	☐
MOV	MOV_CH3_2	MOVANTO CHERWELL3 (CHILL)	CARRIER CHIL	☐	☒	☒	☒	☒	☒	☒	10	☒
MOV	MOV_CH3_1	MOVANTO CHERWELL 3 (AMB)	CARRIER AMB	☐	☒	☒	☒	☒	☒	☒	10	☒
PAR	PAR_CH3_1	PARCELFORCE ROUTE 1 CHERWELL 3	CARRIER AMB	☐	☒	☒	☒	☒	☒	☒	5	☐
PAR	PAR_CH1_1	PARCELFORCE ROUTE 1 CHERWELL 1	CARRIER MIX	☒	☒	☒	☒	☒	☒	☒	10	☐
POL	POL_CH1_1	POLARSPEED ROUTE 1 CHERWELL 1	CARRIER MIX	☒	☒	☒	☒	☒	☒	☒	5	☒
POL	POL_CH3_1	POLARSPEED ROUTE 1 CHERWELL 3	CARRIER MIX	☒	☒	☒	☒	☒	☒	☒	5	☒

New

Close

Route Details

Carrier Routes

Carrier Id: DHLTD
Route Name: DHL EXPRESS (EMA) LUTTERWORTH
Max Trips: 5

Route Code: DHLTD_RTLUT2
Trailer Type: CARRIER AMB
S M T W T F S: ☒ ☒ ☒ ☒ ☒ ☒ ☐ Inactive: ☐

New Edit Delete Assign Transport Mode

Departures

From Loc	Depart	Cut Off
DHLCOVENTRY	19:00	18:45
DHLLUTT	19:00	18:45

New Edit Delete

Services

Service Level	Carrier Service Level	Offset Days	Destination Type	Country Code	Destination
P09	TDK	0	ZONE		P09_1
P09	TDK	0	ZONE		P09_JE_1
P12	TDT	0	ZONE		P12_1
S24	DOM	0	COUNTRY		GB
S24	DOM	0	ZONE		P09_1
S24	DOM	0	ZONE		P12_1
STD	DOM	0	COUNTRY		GB
STD	DOM	0	ZONE		P09_1
STD	DOM	0	ZONE		P12_1

New Edit Delete

The carrier route will indicate if the carrier can deliver the order from the source depot.

The source depot and ant cross-docking depots can be listed with a cut-off time to ensure that the order is available prior to the expected loading time of the vehicle.

The days of the week on which the route operates can be specified.

The type of trailer can be specified and further validation will be performed to ensure that the products for the order can be loaded onto the trailer for the trip for the route.

The carrier routes should be based on the gazetteer information that is provided by the external carrier to ensure that the carrier will be able to deliver the order on the specified date and by the specified time.

The service level of the order and the destination will be assessed to ensure that the delivery location is valid for the route.



The service level can be mapped to the appropriate service level for the carrier to indicate how it will be transported within the carrier's own network.

The 'Destination Type' and 'Destination' will indicate how the delivery location of the order is assessed:

'ZONE' indicates that there may be multiple locations that are valid for the route.

'COUNTRY' indicates that all orders for delivery in a country are valid for the route.

'LOCATION' indicates that orders just for that location are valid for the route.

Note that different destination types can apply for the same service level.

8.9 Location Zones

The location zones can be specified in the 'Business Data Maintenance' screen:

Business Data Maintenance

BDM v2.90
C-TMS v11.21

Order Statu... Service Ty... Surcharges Location T... X-dock Paths Paragon St... Delivery M... Route Codes Location Z... Time Zones

Select a Zone: [P09_1] New Zone Delete Zone Copy Zone Save Zone Routing Code: Cost Centre

Zone Type	Country	Town / Suburb	From Range	To Range	Inactive	Inc/Exc
POSTAL_STRING	GB		AL1	AL1	☐	I
POSTAL_STRING	GB		B1	B1	☐	I
POSTAL_STRING	GB		B14	B14	☐	I
POSTAL_STRING	GB		B15	B15	☐	I
POSTAL_STRING	GB		B16	B16	☐	I
POSTAL_STRING	GB		B2	B2	☐	I
POSTAL_STRING	GB		B3	B3	☐	I
POSTAL_STRING	GB		B30	B30	☐	I
POSTAL_STRING	GB		B35	B35	☐	I
POSTAL_STRING	GB		B37	B37	☐	I
POSTAL_STRING	GB		B4	B4	☐	I
POSTAL_STRING	GB		B46	B46	☐	I

Add Record to Zone Remove Record from Zone Rating

Close

In this example, the 'P09_1' location zone incorporates various postcodes (using the prefix as a postal string) for the delivery locations.

The 'Inc/Exc' flag indicates if the type of zone is being included or excluded from the location zone to enable greater flexibility to specify the delivery locations that are valid for the particular location zone.

8.10 Fixed Routes

The fixed routes will apply to the assessment of the own fleet carriers:



Scheduling Maintenance window showing a table of scheduling rules. The table has columns: Cost Centre, Customer, Rule, Cut Off, Offset, Early, Late, From Zone, To Zone, Coll Off..., Mode, and Service Level. The first row is highlighted in yellow.

Cost Centre	Customer	Rule	Cut Off	Offset	Early	Late	From Zone	To Zone	Coll Off...	Mode	Service Level
HUK	ACV	STD	19:00	2	07:00	19:00					
HUK	ACV	S24	19:00	2	07:00	19:00					
HUK	ALG	SAT	19:30	3	07:00	19:00					
HUK	ALG	SA3	19:30	3	07:00	19:00					
HUK	ALG	STD	19:30	3	07:00	19:00					
HUK	ALG	SA9	19:30	3	07:00	19:00					
HUK	ALG	SAM	19:30	3	07:00	19:00					
HUK	ALG	SA8	19:30	3	07:00	19:00					
HUK	ALG	P12	19:30	3	07:00	19:00					
HUK	ALG	P09	19:30	3	07:00	19:00					
HUK	ALG	S24	19:30	3	07:00	19:00					
HUK	ALG	P10	19:30	3	07:00	19:00					
HUK	GSK	S24	19:00	2	07:00	19:00					

Buttons: New, Delete, Save, Close

For example, 'HUK' orders will be provided with an early delivery date and the time windows will be calculated for that date and time.

The 'Rule' is the service level of the order.

The 'Offset' is a number of days for the delivery to be made (i.e. the order must be available 2 days before the delivery date for the 'STD' service level for the 'ACV' customer).

The 'Cut Off' is a time after which a day will need to be added for the expected delivery for it to be made.

Note that the weekends will be offset automatically.

8.12 Location Fixed Route Details

Note: Applies to fixed drop scheduling only.

Each location that can be planned as a destination may have multiple routes (run numbers) assigned to the location.

Locations window showing details for TYR-EX LTD. The window includes fields for ID, Name, Lat, Long, Time Zone, Loading Rate, Unloading Rate, and Account Profile. Below these fields is a table of routes.

Route Code	Drop Number	Depot Number	Bank Holiday
MB11A1	37	982	
MB11P	36	982	
MBSAT11	53	982	

Buttons: New Location, Save, Cancel, Close, Linked Maint



The routes can be specified as being applicable solely to bank holidays.

8.13 Order Time Window Derivation

The time windows can be derived for the orders that are created via the 'XML' and 'CSV' files by assessing the stock being ordered and the service level.

The assessment of the service level and the delivery type will be performed for the orders when they are created via 'CSV' or 'XML' files and the '**MAINTAIN_SCHEDULE_DATES**' system parameter is 'Y' for the cost centre of the order.

The **DU category** of the order is used to decide whether to check the fixed routes for 'PALLET' or the schedule rules for 'PARCEL'.

'PARCEL' will only be specified if the order only contains DU types with a category of 'PARCEL'.

'PALLET' types will assess the fixed routes for a direct or a radial route for the early delivery date, the locations of the order and the mandated carrier if provided.

If the **early delivery date** is known the route will be checked that it is active on that day of the week.

Future early delivery dates will not offset the date:

Service Level *'Standard'*

Delivery Type *'On Sched'*

Early Avail *SYSDATE*

Late Avail *Delivery Date at Late Target Time*

Early Del *Delivery Date at Early Target Time*

Late Del *Delivery Date at Late Target Time*

Or

Service Level *'Standard'*

Delivery Type *'Off Sched'.*

Early Avail *SYSDATE*

Late Avail *Delivery Date at 17:00*

Early Del *Delivery Date at 08:00*

Late Del *Delivery Date at 17:00*

Same day early delivery date may offset the date:

Service Level *'Standard'*

Delivery Type *'On Sched'*

Early Avail *SYSDATE*

Late Avail *Delivery Date at Late Target Time*

Early Del *Delivery Date at Early Target Time*

Late Del *Delivery Date at Late Target Time*

Or



Service Level 'Standard'

Delivery Type 'Off Sched'.

Early Avail SYSDATE

Late Avail Delivery Date + 3 days at 17:00

Early Del Delivery Date +3 days at 08:00

Late Del Delivery Date + 3 days at 17:00

Note that the delivery date may also be offset to avoid the weekends so it may be +4 or +5 days.

Past early delivery date will offset the date:

Service Level 'Standard'

Delivery Type 'On Sched'

Early Avail SYSDATE

Late Avail Delivery Date + 3 days at Late Target Time

Early Del Delivery Date + 3 days at Early Target Time

Late Del Delivery Date + 3 days at Late Target Time

Or

Service Level 'Standard'

Delivery Type 'Off Sched'.

Early Avail SYSDATE

Late Avail Delivery Date + 3 days + 3 days at 17:00

Early Del Delivery Date +3 days + 3 days at 08:00

Late Del Delivery Date + 3 days + 3 days at 17:00

Note that the delivery date may also be offset to avoid the weekends so it may be +4 or +5 days.

No early delivery date will offset the date:

Service Level 'Standard'

Delivery Type 'On Sched'

Early Avail SYSDATE

Late Avail Next Delivery Date at Late Target Time

Early Del Next Delivery Date at Early Target Time

Late Del Next Delivery Date at Late Target Time

Or

Service Level 'Standard'

Delivery Type 'Off Sched'.

Early Avail SYSDATE



Late Avail *Delivery Date + 3 days at 17:00*

Early Del *Delivery Date +3 days at 08:00*

Late Del *Delivery Date + 3 days at 17:00*

Note that the delivery date may also be offset to avoid the weekends so it may be +4 or +5 days.

'PARCEL' types will use the delivery date, cost centre, customer and service level provided (or a default service level from 'OMS_DEFAULT_SERVICE_LEVEL') to assess the schedule rules.

An early delivery date will calculate the collection date using the delivery offset days for the schedule rule:

Early Avail *Collection Date at 00:00*

Late Avail *Delivery Date at Late Time*

Early Del *Delivery Date at Early Time*

Late Del *Delivery Date at Late Time*

No early delivery date will offset the date when before the cut-off time for the SYSDATE:

Early Avail *SYSDATE at 00:00*

Late Avail *SYSDATE + Delivery Offset Days at Late Time*

Early Del *SYSDATE + Delivery Offset Days at Early Time*

Late Del *SYSDATE + Delivery Offset Days at Late Time*

No early delivery date will offset the date when after the cut-off time for the SYSDATE:

Early Avail *SYSDATE at 00:00*

Late Avail *SYSDATE + 1 day + Delivery Offset Days at Late Time*

Early Del *SYSDATE + 1 day + Delivery Offset Days at Early Time*

Late Del *SYSDATE + 1 day + Delivery Offset Days at Late Time*

If SYSDATE is Friday the weekend will be offset at the start for the above calculations when no early delivery date is provided.

Note that the derived delivery date may also be offset to avoid the weekends.

'XML' orders will assess the above rules if not all of the order time windows are provided.

'CSV' orders will assess the above rules if not all of the order time windows are provided.

The delivery type of 'On Sched' and 'Off Sched' can be set for the 'CSV' and 'XML' orders but this code is not run elsewhere, therefore the order should not have changed automatically the delivery type when the order was unscheduled.

8.14 Scheduling using Parcel Carriers

The 'Parcel Carriers' will assess the carriers that have been setup with a 'Carrier Type' of 'PARCEL'.

The orders will be selected provided that the carrier accepts the type of goods that are being transported.

This process will either create a new 'PCL' trip for the order or it will add the order to an existing 'PCL' trip for the same route for the same delivery date minus the number of offset days for the service level.



The **capacity** of the current trip(s) for the route will be assessed against the **total RPE, weight and volume** of the order being processed:

- If there are no trips for the day for the route and the capacity of the trailer will not be exceeded by the order then a new trip will be created.
- If there is spare capacity then the current trip will be used.
- If there is no spare capacity and the total number of trips for the route for the day has reached the maximum number of trips for the route then the order will remain unscheduled.

The schedule of the trips will be based on the early delivery date and time of the order being processed minus the number of offset days for the service level of the order.

Note that the **'PCL' trips** will be handed-off to an external carrier so they will be assigned to a **schedule for a previous day** based on the number of 'Offset Days' for the carrier route for the service level of the order.

The intention is to advise the external carrier when they need to collect the orders from the depot for delivery within their own network.

The orders for the 'Parcel' carriers can be cross-docked prior to their delivery trips.

The 'Auto Processed PCL' flag will be set if the order has been assessed for this aspect of the scheduling engine.

8.15 Scheduling using 3PL Carriers

The '3PL Carriers' will assess the carriers that have been setup with a 'Carrier Type' of '3PL'.

The orders will be selected provided that the carrier accepts the type of goods that are being transported.

The same logic will apply to the '3PL' carriers as to the 'Parcel' carriers and the orders for the '3PL' carriers can be cross-docked prior to their delivery trips.

The 'Auto Processed 3PL' flag will be set if the order has been assessed for this aspect of the scheduling engine.

8.16 Scheduling using Wholesale Schedule

The 'Wholesale Schedule' will assess the fixed routes to potentially cross-dock the orders multiple times prior to delivery.

There are 3 different types of trips that can be assessed for **unscheduled orders**:

- Collection

The orders will be assessed based on the source and delivery locations of the order for any 'Cross-dock' stops that exist for a route.

- Trunk

The orders will be assessed based on the stops for collection from the current location of the order.

- Direct

The orders will be assessed based on the stops for collection from the source location and delivery to the location/zone of the delivery location of the order.

These orders will not be cross-docked.

There are 2 different types of trips that can be assessed for **partially scheduled orders**:

- Trunk

The orders will be assessed based on the stops for collection from the current location of the order.



- Radial

The orders will be assessed based on the stops for collection from the current location and delivery to the location of the delivery location of the order.

The capacity of the current trip(s) for the route will be assessed against the total RPE, weight and volume of the order being processed to decide if a trip can be used:

- If there are no trips for the day for the route and the capacity of the trailer will not be exceeded by the order then a **new trip** will be created.
- If there is **spare capacity** then the **current trip** will be used.
- If there is **no spare capacity** and the total number of trips for the route for the day has reached the **maximum number** of trips for the route then the order will **remain unscheduled**.

Note that is a '**PARCEL**' order is being processed, it **can be added to a 'RTE' trip** but it **cannot create a 'RTE' trip**.

The schedule of the '**RTE**' trips will be based on the **schedule for the early delivery date and time** of the order being processed.

The orders for the 'Wholesale' carriers can be cross-docked prior to their delivery trips.

The 'Auto Processed WS' flag will be set if the order has been assessed for this aspect of the scheduling engine.

8.17 Scheduling using Mandated Carrier

The orders that have a mandated carrier in the 'Carrier' field will be assessed for the appropriate '3PL', 'Parcel' or 'Wholesale' aspects of the scheduling engine depending on the 'Carrier Type' of the mandated carrier:

In this example, 'DHLTD' must be used to deliver the order.

8.18 Scheduling using Top Up Process

The 'Top Up Process' has parameters that can be used to decide which orders can be used to 'top-up' which trips:



The delivery location of the order will be used to assess onto which trip the order can be added and trunk trips can be created to ensure that the order is transported between depots in time for the departure of the delivery trip.

The 'Master' locations will be suitable to ensure that the same location code is used in the different networks for the different cost centres for the orders.

The 'Network Schedule' will be used to schedule orders between for collection into depots and delivery out of depots, or direct deliveries between supplier and customer locations, using the fixed routes and carrier routes.

8.20 Scheduling using NHSBT Schedule

The 'NHSBT Schedule' is a specific process to assess the fixed routes and add orders to the trips that have been created for the fixed routes.

This process will be used to schedule orders up to a week in advance.

8.21 Scheduling using Fixed Drop Schedule

Warning: This is an incomplete guide.

The Fixed Drop scheduling engine is a specific process that schedules according to fixed drops on fixed routes.

The fixed drops are stored against each location.

The orders received MUST include an order reference "RUN_NUMBER" set to a valid route code, and that fixed route MUST have a route end time.



The process can schedule:

- Desk collection jobs onto DSK trips
- Collection/Delivery radial jobs onto fixed route trips labelled as RTE trips (the prefix is configurable through system parameters).
- Trunk movements between depots
- 3rd-party trips routed onto trips labelled as 3PL trips.

Each RTE trip created will be marked with the fixed drop number (visible in the planning screen). Jobs will be placed on the trips in drop number sequence. CL stops will be marked as drop number 999, whilst any jobs automatically planned onto these trips by the route number will be marked as drop 998.

8.22 Scheduling Engine Processing

The different aspects of the scheduling engine will be run in sequence as described above.

Only the orders that have not been marked for manual scheduling, or that have previously been processed automatically, will be processed if the cost centre and the customer allow automatic scheduling.

8.23 Pack Confirmation/Labelling

There are 2 methods of scheduling the order ready for when it is being picked and packed and labelled:

- C-TMS Pack Confirmation

A 'Pack' button can be pressed in the 'Order Summary' and 'Order Details' screens to schedule the order and then print a label to a default printer (for the user and also for the carrier for the user).

These 'Pack' buttons are designed to be used for orders that have been entered manually in C-TMS rather than in the source warehousing system.

Note that the orders can be scheduled automatically when the scheduling engine is running and the orders can be scheduled without delay because the scheduling threshold will not apply to this packing process.

- WMS Pack Confirmation

A pack 'XML' file can be generated from the source WMS system (e.g. 'SAP') to pack the order and print a label optionally.

A pack 'CSV' file can be generated from the source WMS system (e.g. a 'CIPD' file from 'Unison') to pack the order and print a label optionally.

The EDI parameter 'PRINT_LABEL' must be set to 'Y' for a label to be printed to either the advised printer or a default printer for the user.

Note that the order for such pack confirmation must already be scheduled for the label to be printed in the required format for the carrier of the delivery trip.

- Print Label

All of the labels, or a selection of the labels, may be printed or reprinted in the 'Print Label' screen in C-TMS.

However, a fresh set of the labels will be printed via the generation of a new pack 'XML' file from the source WMS system.

8.24 Tracking References

The tracking references will be generated for the labels as they are printed.



These tracking references will be printed on the labels and they will be used by the external carriers for tracking the items for the orders as they are being delivered.

Each carrier can have its own format and sequence numbers so that the labels and the tracking references are unique for that carrier.

The tracking references will be stored against the carton numbers if the order is packed via a 'CSV' file called 'CIPD' from 'Unison'.

The tracking references may be displayed in the 'Print Label' screen in the 'Orders' screen:

The screenshot shows a window titled 'Re-Print Label' with a table containing tracking information. The table has columns: Typ, Tracking Ref, Carton Number, Label, of, Total, and Sel. The first row is highlighted in yellow and contains the following data: Typ: D, Tracking Ref: JD000226320000287051, Carton Number: 1, Label: 1, of: 1, Total: 1, and Sel: ☒. Below the table, there is a 'Label Printer Name' field with the value 'CHWL_38' and a checkbox for 'Use Default Printers'. At the bottom, there are three buttons: 'Print/Reprint ALL', 'Reprint Selected', and 'Cancel'.

Typ	Tracking Ref	Carton Number	Label	of	Total	Sel
D	JD000226320000287051	1	1	of	1	☒
S	4691267641		1	of	1	☐
						☐
						☐
						☐
						☐
						☐
						☐
						☐
						☐
						☐
						☐

Label Printer Name: CHWL_38 ☐ Use Default Printers

Print/Reprint ALL Reprint Selected Cancel

8.25 Unscheduling Orders

If an order is unscheduled from its delivery trip, the existing tracking references will be removed because the order will have to be potentially repacked and relabelled when it is rescheduled in case a different carrier is used to deliver the order.

The 'Manual Schedule' flag will be set to indicate that the order will not be reprocessed automatically by the scheduling engine to ensure that the order is not simply rescheduled onto the same trip.

8.26 Manual Trip Planning

The orders can be scheduled manually if they have failed to schedule automatically or they have been unscheduled for replanning.

The same rules can be applied for the manual planning to ensure that the order can be taken by the carrier, the 'TRIP_VALIDATE_PARCEL_ORDER_ASSIGNMENT' system parameter will control this validation when it is set to 'Y'.

The 'TRIP_PREVENT_PARCEL_CARRIER_ASSIGNMENT' system parameter can be used to prevent orders being assigned to trips for 'Parcel' carriers when it is set to 'Y'.



8.27 CITD Files

Files can be generated for the 'Unison' source WMS system to return the tracking references for storage against the packs that have been created there.

The file can be triggered when the trip status is updated to 'ACCEPTED' and the order has been packed in 'Unison' and a carton number has been provided.

8.28 Despatch Confirmation

A check can be performed when the trip is despatched in the trip planning screens to ensure that all of the orders on the trip have been fully packed.

The system parameter 'X' will control this validation for the trips for the external carriers.

Note that the unpacked orders will have to be unscheduled or packed before the trip can be despatched.

8.29 Physical Manifests

A physical manifest may be printed when the trip is updated to 'EN-ROUTE' status.

The physical manifest will be printed to the default printer for the user if the carrier of the delivery trip is setup to print a report.

8.30 Electronic Manifests

An electronic manifest may be generated as a 'XML' file when the trip is updated to a specified status and/or when it is updated to 'EN-ROUTE' status.

The trip status may be specified as an EDI parameter called 'STATUS' (e.g. 'PLANNED' and 'TENDERED').

Some carriers (e.g. 'Polarspeed') cannot accept multiple files for the same order so they will only send a single electronic manifest when the trip is 'EN-ROUTE'.

Other carriers will accept multiple updates as the trip is planned with more orders and when those orders are packed differently.

Only the changes since the last file was generated will be included in the next file for the specified trip status.

8.31 Paragon Considerations

There are limitations for using Paragon to plan all of the orders rather than to plan the orders for the own fleet and then allow the scheduling engine to plan the remaining orders and the orders that have been mandated for an external carrier:

- Paragon will need to assess the individual gazetteer data for the external carriers.
- Paragon will need to assess the shipment size, DU type and product type for the external carriers.
- Paragon will need to derive the carrier service level for the carrier based on the service level of the order.
- Paragon will need to ensure that a mandated carrier is used.
- Any orders that have been printed and that have generated a tracking reference will lose those references if they are unscheduled (which is what Paragon does to respin a trip).
- Some of the labels display a 'Trip ID' so they will need to be reprinted if the order is rescheduled (e.g. 'Standard', 'Penguin').
- Some of the labels display data from the carrier route code name and this route code will not be provided by Paragon (e.g. '(EMA)' and '(OXF)' are translated as the origin code for the DHL Express labels).



- The trip stop times will not be calculated for the external carriers based on the time windows of the orders on the stops but they will be calculated based on the distance and time from the previous stop.
- The trip stop times are used to advise the external carrier when the orders will be delivered in their network via the 'Electronic Manifest'.
- Files may be generated for the 'Electronic Manifest' when the orders are unscheduled temporarily.

8.32 Depot Sweep Processes

 **Warning:** This is an incomplete guide.

The Depot Sweep EDI processes can move orders between schedules automatically if not completed.

These processes are most commonly associated with fixed drop scheduling and are useful for Paragon planning, as the schedule is linked to the Paragon working area for each day.

The fundamental principles are:

- Part of scheduling engine
 - ♦ Any order that cannot be planned to look for a further run on that day and automatically plan instead. The process will check the routes and change the order reference to plan onto a different run, reset the manual schedule flag and let the next schedule engine run pick it up. If no runs found on that day, then remains unscheduled (and will be carried forward on planning day end).
- Planning Day end
 - ♦ Any orders of any type not fully planned at the end of the day carried forward to next day (including non-working days). The scheduling engine process above will then pick up the order and plan according to the rules above.
 - ♦ Expected to be scheduled process once per day, on or around 1830-1900.
- Actual day end
 - ♦ Any DSK (Desk Collections) orders that have not been completed (debriefed) at end of day to carry forward to next day and planned automatically onto the next DSK collection trip.
 - ♦ Reset any TODD orders and next day orders that remain unscheduled.
 - ♦ Expected to be scheduled process once per day, around (before) 2359.

This is the definition of the automated scheduling and carry-forward rules. It will also be possible to carry an order forward manually (for example, when determining on Monday that you will not deliver until Thursday, you can carry the order forward to Thursday's schedule manually from the planning screen.

The depot sweep processes can be configured with parameters to control which depot is affected by the process, what route types are affected and what action to take, as shown below:

Parameter	Value	Purpose
DEPOT_SWEEP	Y	Identifies that the EDI process is to perform the depot sweep.
DEPOT	blank or RDC location	Identifies the depot that is affected by this depot sweep, or all depots if blank.
ROUTE_TYPE	COLLECT_DESK	Identifies that the EDI process will assess the orders for the collection desks based on the run number of their route.
ROUTE_TYPE	RADIAL	Identifies that the EDI process will assess the orders for collection from the customers or for delivery to the customers based on the run number of their route.
ACTION	CARRY_FORWARD	Identifies that the EDI process will assess the orders and carry forward any unscheduled orders to the next day.
ACTION	RESCHEDULE	Identifies that the EDI process will assess the orders and unschedule any incomplete orders from their incomplete trips and carry forward any unscheduled orders to the next day.

 **Note:** The Route Type can include a list of types of routes that are separated by a comma.



8.33 Potential Developments

There are potential developments to enable the scheduling engine to be more specific for the operations:

- Include a matrix for the deliveries for the own fleet for the carrier routes and fixed routes to indicate when the location will accept the order.
- This matrix would be used to set the order time windows to use the next delivery date for the location should an invalid delivery date be provided.
- The gazetteer data can be assessed instead of the carrier routes if appropriate routes and zones cannot be maintained effectively.



9 SAVING

⚠ **Warning:** This is an incomplete guide.



10 Scheduling Engine Overview

The scheduling engine is an automated process that will select unscheduled orders and apply them to the available trips or create new trips as required based on the routes that exist.

The fixed routes (for own fleet) and the carriers routes (for external carriers but also for own fleet parcel services) will be assessed based on rules to schedule the orders.

10.1 System Parameters

- 'AUTO_SCHEDULING'

A cost centre parameter that controls which orders are considered by the scheduling engine, the parameter must be set to 'Y' for the cost centre of the order for the order to be scheduling automatically.

- 'ENGINE_RUNNING'

A cost centre parameter which will be set automatically to 'Y' by the schedule engine process when the process is being run for the database.

This system parameter will be set back to 'N' by the process once all of the available orders have been processed.

- 'MAINTAIN_SCHEDULE_DATES'

A cost centre parameter which will control if the order time windows will be derived for the 'XML' and 'CSV' orders.

The system parameter must be set to 'Y' for the cost centre of the order to be active.

- 'TRIP_PREVENT_PARCEL_CARRIER_ASSIGNMENT'

A cost centre parameter which will control if orders can be planned manually to a trip for a 'Parcel' carrier.

The system parameter must be set to 'Y' for the cost centre of the order to be active.

- 'TRIP_VALIDATE_PARCEL_ORDER_ASSIGNMENT'

A cost centre parameter which will control if orders are validated when they are planned manually to a trip for a 'Parcel' carrier.

The system parameter must be set to 'Y' for the cost centre of the order to be active.

- 'TRM_3PL_REROUTE'

A system parameter that can be set to 'Y' to enable the functionality in the Fixed-Drop Scheduling engine to plan the orders to the next available route.

- 'TMP_ENG_TRIP_PREFIX'

A system parameter that controls the prefix that the trips created from fixed drop scheduling drops will be prefixed with e.g. TMP, MAN, RTE etc.

If the trips are to be replanned by Paragon, set this to TMP. If the trips are not to be replanned, then set this to RTE (or some other easily recognizable prefix).

10.2 Scheduling Engine Control

The scheduling engine may be defined in the 'Scheduling Maintenance' screen.

To use the screen, the user must be logged in as 'EDI_OWNER' so that the process is started with the correct level of access control.



The screen allows users to start and stop the scheduling engine and select which functionality runs and the sequence in which the different aspects of the scheduling engine are run.

Note that if a process is not ticked as being 'Included' IT WILL NOT BE RUN.

The 'Audit' tab page will record each successful completion of the scheduling engine and will also display any errors which occurred during the processing of the orders.

The audit does not record why an order failed to schedule (because it would have to record why it failed to schedule with every route available).

There are different processes that the scheduling engine can use - 'Parcel Carriers', '3PL Carriers', 'Wholesale Schedule', 'Mandated Carriers', 'Top Up Process', 'Network Schedule' and 'NHSBT Schedule':

Scheduling Process	Included	Run Order	Incl On Cust Drop	Unplanned Order Email
Mandated Carrier	☒	1	☒	☐
Parcel Carriers	☒	2	☒	☐
Wholesale Schedule	☐	3	☐	☐
3PL Carriers	☐	4	☐	☐
Baxter Trunks	☐	5	☐	☐
Top Up Process	☒	6	☒	☐

Start Scheduling Engine [] minutes

Stop Scheduling Engine []

New Delete Save Close

The 'Run Order' can be specified to the sequence in which each type of scheduling engine process will be run so that certain types of orders and carriers can be assessed preferentially.

In this example, the 'Mandated Carrier' process will be run first.

10.3 Customer Settings

- 'Exclude From Scheduling Engine'

Customers must be actively excluded from the scheduling engine if they do not want to have their orders scheduled automatically:



Customers

Customer ID: 02, 365, AB, ACD, **ACV**, AI, AIM, ALG, ALI, ALL, ALN, ALZ, AMB, AMS, AND, APP, AQU, ARJ

Customer Name: ACTAVIS
 Contact Name:
 Customer Group: H/CARE
 Customer Type: Customer
 Cost Centre:
 EFX Site:
 MTM Customer Code: AC
 Late Order Days Threshold: 2
 Unison Interface Value: D33

Order Revenue Charging Type: Actual Despa...
 Allocation Method: Weight

Fuel Charge%:
 Country: GB United Kingdom No.
 Location:
 Address:
 Town:
 County:
 Postcode:
 Consolidation New Delete Cancel Save

Parameters

- ☐ DU Type Contract Charges
- ☐ Order Header Contract
- ☐ Exclude from Scheduling Engine
- ☐ Disable All Actuals (Debrief)
- ☐ Allow Manual RPE
- ☐ Update To Deliver Qty
- ☐ Consolidate Orders
- ☒ POD document available
- ☐ Interface Orders to LOGNET
- ☐ Use Alternative Item
- ☐ Trip Confirmation from Tendered
- ☐ No Minimum Collection
- ☐ Auto Planning
- ☐ Calculate RPE
- ☐ Process Scans
- ☐ Validate Product from Master List
- ☐ Pick Quantity Required in Order Entry

Close

- 'Carrier Preferences'

The carrier must exist as a preferred carrier for the customer of the order if the customer has a list of carriers that it will accept for the delivery of its orders:

Customers

Customer ID: 02, 365, AB, ACD, **ACV**, AI, AIM, ALG, ALI, ALL, ALN, ALZ, AMB, AMS, AND, APP, AQU, ARJ

Customer Name: ACTAVIS
 Contact Name:
 Customer Group: H/CARE
 Customer Type: Customer
 Cost Centre:
 EFX Site:
 MTM Customer Code: AC
 Late Order Days Threshold: 2
 Unison Interface Value: D33

Order Revenue Charging Type: Actual Despa...
 Allocation Method: Weight

Carrier: POL 1, TBD 2, DHLCOVENTRY 3, DHLSKEM 4, DHLCOAL 5

Remove Preference

Dedicated Carrier:
 Consolidation New Delete Cancel Save

Close

In this example, the 'POL' carrier will be assessed first and if that carrier cannot take the order, the 'TBD' carrier will be assessed next.

Note that if a customer has no preference, the orders for that customer may be delivered by any carrier without preference.

- 'Scheduling Threshold'

A threshold value may be set to exclude the order from the scheduling engine until a set period of time prior to its early delivery date and time:



The number of minutes may be specified and a value of '0' will indicate that the order cannot be scheduled automatically in the particular aspect of the scheduling engine until the early delivery date and time has been reached by the system date and time (i.e. in the local time zone).

Note that if a threshold value is not specified that the order will effectively be valid for the aspect of the scheduling engine to process once it has been created, validated and set to 'UNSCHEDULED' status.

10.4 DU Category

The DU category can be specified to denote the type of despatch unit for planning purposes:

DU Type	DU Description	DU Category	Volume	Vol Collapsed	Max KG	RPE	Priority	AVG VMT	Decimals	No Re-Calc	Owned Pack
4WAY	4 Way Pallet (GKN)	PALLET	1.2500								
A1	EURO A GRADE	PALLET	1.0000								
A2	Delete		1.0000								
AH14	AH14	PALLET	1.2500								
AH1E	AH1E	PALLET	1.0000								
AH24	AH24	PALLET	1.2500								
AH2E	AH2E	PALLET	1.0000								
AHC4	AHC4	PALLET	1.2500								
AHCE	AHCE	PALLET	1.0000								
AHDF	AHDF	PALLET	1.0000								
AUKG	AUKG	PALLET	1.2500								
B1	EURO B GRADE	PALLET	1.0000								
BOX	SMALL	PARCEL	0.0200								

A DU category of 'PALLET' indicates that it is a pallet that would normally be transported by own fleet.

A DU category of 'PARCEL' indicates that it is a parcel that would normally be transported by a parcel carrier service by own fleet or by an external 'PARCEL' carrier.

Note that a DU type will have a DU category of 'PALLET' by default unless stated otherwise.

The DU category of an order will be set to 'PARCEL' based on the presence of a DU type having a DU category of 'PARCEL'.



The DU category will then be used to decide which set of routes (fixed for 'PALLET' or carrier for 'PARCEL') to check for the derivation of the order time windows when the orders are created via the 'XML' and 'CSV' files.

Note that some 'PARCEL' carriers will be able to take 'PALLET' items should they be setup to do so in the 'Carrier Rules' screen for the DU types.

10.5 Carrier Type

The 'Carrier Type' will determine the scheduling engine process in which that carrier will be assessed:

Resource Maintenance

RESOURCE v2.164
C-TMS v11.21

Carriers Carrier Groups Carrier Lanes Carrier Types Fixed Charges Service Types Trailer Types Trailers Drivers Loc Prd Conv Despatch Unit Types

☐ Active ☐ Inactive ☒ All

Carrier ID	Name	Group	Carrier Ty...	Haul Unit	Hub Loc	StartEnd Hub Hub	BC Type	TMS Ref	HQ Loc	Exp Type	VAT No	MS	TT	SS	SF	OTF	Alt Mul Car Ter	IA	E/D
TEK	TEK Freight	Hauliers	Haulier																
247	247	Hauliers	Haulier																
FET	FEK	Hauliers	Haulier																
PHAR GO	Phar Go	Hauliers	Haulier		DHLCHE														
CRISIS	CRISIS	Hauliers	Haulier		DHLCHE														
QUIKSTAT	Quikstat	Hauliers	Haulier																
CRISIS GPG	Crisis Groupage	Hauliers	Haulier		DHLCHE														
TBD	TBD	Hauliers	PARCEL																
DHL Express	DHL Express	Hauliers	PARCEL		DHLBAKT														
POL	Polar Speed	Hauliers	PARCEL																
UPS	UPS	Hauliers	PARCEL																
DHLDRY	DHL (DRY ICE) A	Hauliers	PARCEL																
YOD	Yodel	Hauliers	PARCEL																
DHLLSVAN	DHLLSVAN	PARCEL	PARCEL	10	DHLCHE				DHLCHE										
PAR	Parcelforce	Hauliers	PARCEL																
MOV	Movianto	Hauliers	PARCEL																
CHE	CHE (Holding)	Hauliers	PARCEL																
CitySprintSD	City Sprint Same	Hauliers	PARCEL		DHLBAKT														
SAM	Sameday	Hauliers	PARCEL																
DHLTD	DHL TD EXPRESS	Hauliers	PARCEL																

New Carrier Contacts Edit Delete

The 'Carrier Type' may be '3PL' or 'PARCEL' to apply the specific scheduling engine process.

10.6 Carrier Formats

Different formats can be setup for each carrier:



Resource Maintenance

RESOURCE v2.164
C-TMS v11.21

RPE Cust Load Rates Tractors Vessels Carrier Routing Carrier Formats Carrier Tracking Carrier Config Vehicles Own Charges Carrier Format...

Type Refresh

Type	Format	Print Total on Label	Current Version	Activation Date	Delete Version
Label	DHLStandard1				
Label	DHL_Express2		84	05-MAR-2016 10:25:26	
Label	Movianto	Y		11-DEC-2014 08:25:34	
Label	DHL_Express	Y	84	03-MAY-2013 13:29:00	
Label	Parcelforce	Y			
Label	Polarspeed	Y	25	29-JUL-2016 17:04:38	
Label	DHL_Penguin1				
Label	Standard1	Y			
Label	Yodel	Y	130	27-FEB-2015 10:43:57	
Manifest	DHL_Express				
Manifest	Yodel				
Manifest	Movianto				
Manifest	Standard1				
Manifest	Standard2				

New Save Delete

The current version of the gazetteer data can be stored for the label format.

The label format can be assigned to a routing format to obtain the gazetteer data:

Resource Maintenance

RESOURCE v2.164
C-TMS v11.21

RPE Cust Load Rates Tractors Vessels Carrier Routing Carrier Formats Carrier Tracking Carrier Config Vehicles Own Charges Carrier Format...

Type	Format	Routing Format
Label	DHLStandard1	DHLStandard1
Label	DHL_Express	DHL_Express
Label	DHL_Express2	DHL_Express
Label	DHL_Penguin1	DHL_Penguin1
Label	Movianto	Movianto
Label	Parcelforce	Parcelforce
Label	Polarspeed	Polarspeed
Label	Standard1	Standard1
Label	Yodel	Yodel
Manifest	DHL_Express	DHL_Express
Manifest	Movianto	Movianto
Manifest	Standard1	Standard1
Manifest	Standard2	Standard2
Manifest	Yodel	Yodel

New Save Delete

The carrier can be configured to have a label format and a manifest format:



Resource Maintenance

RESOURCE v2.164
C-TMS v11.21

RPE Cust Load Rates Tractors Vessels Carrier Routing Carrier Formats Carrier Tracking Carrier Config Vehicles Own Charges Carrier Format...

Carrier: DHLTD DHL TD EXPRESS Refresh

Label Format: DHL_Express2 Manifest Format: DHL Express Print Manifest: Y Vol Factor (Kgm3):

Print Shipment Label: N

Location	Customer	Schedule Number	Account Number	Contract Number	Shipment Tracking Ref	Unit Tracking Ref
DHLLUTT	DEX		186227040		DHLTD_AWB_Sh	DHLTD_LPN_DU
DHLLUTT	HAE		186227079		DHLTD_AWB_Sh	DHLTD_LPN_DU
DHLLUTT	GLM		186226823		DHLTD_AWB_Sh	DHLTD_LPN_DU
DHLLUTT	FER		186461437		DHLTD_AWB_Sh	DHLTD_LPN_DU
DHLLUTT	SOR		186470772		DHLTD_AWB_Sh	DHLTD_LPN_DU
DHLLUTT	SET		185411637		DHLTD_AWB_Sh	DHLTD_LPN_DU
DHLCHER3	SER		186227095		DHLTD_AWB_Sh	DHLTD_LPN_DU
DHLCHER3	ACV		186226500		DHLTD_AWB_Sh	DHLTD_LPN_DU
DHLCHER3	ALG		185948672		DHLTD_AWB_Sh	DHLTD_LPN_DU
DHLCHER3	NOR		186144103		DHLTD_AWB_Sh	DHLTD_LPN_DU
DHLCHER3	CPK		186692417		DHLTD_AWB_Sh	DHLTD_LPN_DU
DHLCHER1	ARR		186226034		DHLTD_AWB_Sh	DHLTD_LPN_DU

New Save Delete

The physical manifest can also be requested to be printed automatically when the trip is despatched.

The tracking references can be applied by customer by depot.

The tracking references can be updated with a range of values for the carriers:

Resource Maintenance

RESOURCE v2.164
C-TMS v11.21

RPE Cust Load Rates Tractors Vessels Carrier Routing Carrier Formats Carrier Tracking Carrier Config Vehicles Own Charges Carrier Format...

RefType Refresh

Ref Type	Tracking Level	Prefix	Check Digit Function	Check Digit	Start	End	Next
CHE_DU	Shipment			6	1	999999999	219806
CITY_DU	Shipment			1	1	999999999	1
DHLCHER	Shipment	DHLCHER		6	1	999999	1287
DHLTD_AWB_Sh	Shipment		Standard1 (MOD7)	4	469100000	469144999	469128531
DHLTD_LPN_DU	DU	JD0002263200	Standard1 (MOD7)	3	1	500000	289411
DHL_AWB_NEW	Shipment		Standard1 (MOD7)	1	990597000	990641999	990597000
GLAV_Shpt	Shipment	GLAV	Standard1 (MOD7)	4	100000	499999	159002
PAR1_Shpt	Shipment	YD	Parcelforce	6	50000	149999	67223
PAR3_OLD	Shipment	YE	Parcelforce	6	400000	499999	400000
PAR3_Shpt	Shipment	GW	Parcelforce	7	10000	109999	81800
PEN_DU	DU	PEN	Standard1 (MOD7)	5	1	999999999	21467
POL_DU	DU	DHL	Standard1 (MOD7)	5	10000000	20000000	10476541
POL_Shpt	Shipment	CON	Standard1 (MOD7)	0	10000000	20000000	10384507
SAM_DU	DU	SAME		2	1	999999999	9921
TBD_Shpt	Shipment			5	1	999999999	5612

New Save Delete

10.7 Carrier Gazetteer

The gazetteer data can be imported for each carrier for the latest version to be applied:



Resource Maintenance

RESOURCE v2.164
C-TMS v11.21

RPE Cust Load Rates Tractors Vessels Carrier Routing **Carrier Formats** Carrier Tracking Carrier Config Vehicles Own Charges Carrier Format...

Label Format: DHL_Express Country Code: GB From Postcode: To Postcode: Refresh

Version: 84 Sortation Hub: Depot: Direction: Town:

Label Format	Version	Country Code	Country Name	From Postcode	To Postcode	Town	Sortation Hub
DHL_Express	84	GB	United Kingdom	AB10	AB10	ABERDEEN	ABZ
DHL_Express	84	GB	United Kingdom	AB10	AB10	BRIDGE OF DEE	ABZ
DHL_Express	84	GB	United Kingdom	AB11	AB11	ABERDEEN	ABZ
DHL_Express	84	GB	United Kingdom	AB11	AB11	TORRY	ABZ
DHL_Express	84	GB	United Kingdom	AB12	AB12	PORTLETHEN	ABZ
DHL_Express	84	GB	United Kingdom	AB12	AB12	MARYCULTER	ABZ
DHL_Express	84	GB	United Kingdom	AB12	AB12	WEST TULLOS INDUS	ABZ
DHL_Express	84	GB	United Kingdom	AB12	AB12	ALTENS	ABZ
DHL_Express	84	GB	United Kingdom	AB12	AB12	BRIDGE OF DEE	ABZ
DHL_Express	84	GB	United Kingdom	AB12	AB12	BADENTON INDUSTRIA	ABZ
DHL_Express	84	GB	United Kingdom	AB12	AB12	ABERDEEN	ABZ
DHL_Express	84	GB	United Kingdom	AB12	AB12	COVE BAY	ABZ
DHL_Express	84	GB	United Kingdom	AB12	AB12	COVE	ABZ
DHL_Express	84	GB	United Kingdom	AB12	AB12	ARDOE	ABZ
DHL_Express	84	GB	United Kingdom	AB12	AB12	BLAIRS	ABZ

New Save Delete

The carrier routing data will be used for the production of the carrier labels and this data should be used to specify the carrier rules for ensuring that the orders are scheduled correctly.

Note that this data is not used in the scheduling engine or the derivation of the order time windows.

10.8 Carrier Rules

The carrier rules will apply to the assessment of the parcel carriers:

- Shipment Size

Carrier Rules Maintenance

CARRIER RULES v1.9
C-TMS v11.21

Carrier Rules Shipment DU Type Product Type **Carrier Rules Services**

Carrier Id	Ship Min Wt	Ship Max Wt	Ship Min Vol	Ship Max Vol
CHE	0.00	100000.00	0.00	999999.00
CitySprintSD	0.00	500.00	0.00	9999.00
DHLCHER	0.00	10000.00	0.00	99999.00
DHLDRY	0.00	500.00	0.00	9999.00
DHLLSVAN	0.00	10000.00	0.00	9999.00
DHLLSVAN2	0.00	10000.00	0.00	9999.00
DHLLUTT	0.00	10000.00	0.00	99999.00
DHLTD	0.00	100000.00	0.00	999999.00
MOV	0.00	500.00	0.00	9999.00
PAR	0.00	500.00	0.00	9999.00
POL	0.00	550.00	0.00	9999.00
SAM	0.00	10000.00	0.00	9999.00

New Delete Cancel Save

Close

The carrier must be able to transport the size of the shipment (i.e. based on the total for the order) based on the weight and the volume.

- DU Type



Carrier Rules Maintenance

CARRIER RULES v1.9
C-TMS v11.21

Carrier Rules Shipment DU Type Product Type Carrier Routes Services

Carrier Id	DU Type
DHLTD	4WAY
DHLTD	BOX
DHLTD	EA
DHLTD	JCCD
DHLTD	JCEU
DHLTD	JCFR
DHLTD	LARGE
DHLTD	MEDIUM
DHLTD	PALLET
DHLTD	SMALL
MOV	4WAY
MOV	AUKG

New Delete Cancel Save

Close

The carrier must be able to transport the DU types that exist for the order lines (as packed and despatched).

• Product Type

Carrier Rules Maintenance

CARRIER RULES v1.9
C-TMS v11.21

Carrier Rules Shipment DU Type Product Type Carrier Routes Services

Carrier Id	Product Type	Priority
DHLTD	AMBIENT	☒
DHLTD	CD	☐
DHLTD	MGA	☐
MOV	MGA	☐
MOV	CHILL	☐
MOV	CD	☐
MOV	FLU VACC	☐
MOV	MGC	☐
PAR	MGA	☐
PAR	AMBIENT	☐

New Delete Cancel Save

Close

The carrier must be able to transport the product types that exist for the order lines (as packed and despatched).

• Service Level



Carrier Rules Maintenance

CARRIER RULES v1.9
C-TMS v11.21

Carrier Rules Shipment DU Type Product Type Carrier Routes Services

Carrier ID	Route Code	Route Name	Trailer Type	S	M	T	W	T	F	S	Max trips	Inact...
DHLTD	DHLTD_CH1_1	DHL EXPRESS (EMA) CHER 1	CARRIER MIX	☐	☒	☒	☒	☒	☒	☒	5	☐
DHLTD	DHL_LUT_SAT	DHL EXPRESS (EMA) LUTT SAT	CARRIER AMB	☐	☒	☒	☒	☒	☒	☒	5	☐
DHLTD	DHLTD_C1_SAT	DHL EXPRESS (EMA) CHER 1 SAT	CARRIER MIX	☐	☐	☐	☐	☐	☒	☒	10	☐
DHLTD	DHLTD_RTLUT1	DHL EXPRESS (OXF) LUTTERWORTH	CARRIER AMB	☐	☒	☒	☒	☒	☒	☒	5	☐
DHLTD	DHLTD_CH3_1	DHL EXPRESS (EMA) CHER 3	CARRIER MIX	☒	☒	☒	☒	☒	☒	☒	10	☐
DHLTD	DHLTD_RTLUT2	DHL EXPRESS (EMA) LUTTERWORTH	CARRIER AMB	☒	☒	☒	☒	☒	☒	☒	5	☐
DHLTD	DHLTD_CH1_2	DHL EXPRESS (OXF) CHER 1	CARRIER MIX	☐	☒	☒	☒	☒	☒	☒	5	☐
DHLTD	DHLTD_CH3_2	DHL EXPRESS (OXF) CHER 3	CARRIER MIX	☒	☒	☒	☒	☒	☒	☒	5	☐
DHLTD	DHLTD_C3_SAT	DHL EXPRESS (EMA) CHER 3 SAT	CARRIER MIX	☐	☐	☐	☐	☐	☒	☒	10	☐
MOV	MOV_CH3_2	MOVANTO CHERWELL3 (CHILL)	CARRIER CHIL	☐	☒	☒	☒	☒	☒	☒	10	☒
MOV	MOV_CH3_1	MOVANTO CHERWELL 3 (AMB)	CARRIER AMB	☐	☒	☒	☒	☒	☒	☒	10	☒
PAR	PAR_CH3_1	PARCELFORCE ROUTE 1 CHERWELL 3	CARRIER AMB	☐	☒	☒	☒	☒	☒	☒	5	☐
PAR	PAR_CH1_1	PARCELFORCE ROUTE 1 CHERWELL 1	CARRIER MIX	☒	☒	☒	☒	☒	☒	☒	10	☐
POL	POL_CH1_1	POLARSPEED ROUTE 1 CHERWELL 1	CARRIER MIX	☒	☒	☒	☒	☒	☒	☒	5	☒
POL	POL_CH3_1	POLARSPEED ROUTE 1 CHERWELL 3	CARRIER MIX	☒	☒	☒	☒	☒	☒	☒	5	☒

New

Close

Route Details

Carrier Routes

Carrier Id: DHLTD
Route Name: DHL EXPRESS (EMA) LUTTERWORTH
Max Trips: 5

Route Code: DHLTD_RTLUT2
Trailer Type: CARRIER AMB
S M T W T F S: ☒ ☒ ☒ ☒ ☒ ☒ ☐ Inactive: ☐

New Edit Delete Assign Transport Mode

Departures

From Loc	Depart	Cut Off
DHLCOVENTRY	19:00	18:45
DHLLUTT	19:00	18:45

New Edit Delete

Services

Service Level	Carrier Service Level	Offset Days	Destination Type	Country Code	Destination
P09	TDK	0	ZONE		P09_1
P09	TDK	0	ZONE		P09_JE_1
P12	TDT	0	ZONE		P12_1
S24	DOM	0	COUNTRY		GB
S24	DOM	0	ZONE		P09_1
S24	DOM	0	ZONE		P12_1
STD	DOM	0	COUNTRY		GB
STD	DOM	0	ZONE		P09_1
STD	DOM	0	ZONE		P12_1

New Edit Delete

The carrier route will indicate if the carrier can deliver the order from the source depot.

The source depot and ant cross-docking depots can be listed with a cut-off time to ensure that the order is available prior to the expected loading time of the vehicle.

The days of the week on which the route operates can be specified.

The type of trailer can be specified and further validation will be performed to ensure that the products for the order can be loaded onto the trailer for the trip for the route.

The carrier routes should be based on the gazetteer information that is provided by the external carrier to ensure that the carrier will be able to deliver the order on the specified date and by the specified time.

The service level of the order and the destination will be assessed to ensure that the delivery location is valid for the route.



The service level can be mapped to the appropriate service level for the carrier to indicate how it will be transported within the carrier's own network.

The 'Destination Type' and 'Destination' will indicate how the delivery location of the order is assessed:

'ZONE' indicates that there may be multiple locations that are valid for the route.

'COUNTRY' indicates that all orders for delivery in a country are valid for the route.

'LOCATION' indicates that orders just for that location are valid for the route.

Note that different destination types can apply for the same service level.

10.9 Location Zones

The location zones can be specified in the 'Business Data Maintenance' screen:

Business Data Maintenance

BDM v2.90
C-TMS v11.21

Order Statu... Service Ty... Surcharges Location T... X-dock Paths Paragon St... Delivery M... Route Codes Location Z... Time Zones

Select a Zone: [P09_1] New Zone Delete Zone Copy Zone Save Zone Routing Code: Cost Centre

Zone Type	Country	Town / Suburb	From Range	To Range	Inactive	Inc/Exc
POSTAL_STRING	GB		AL1	AL1	☐	I
POSTAL_STRING	GB		B1	B1	☐	I
POSTAL_STRING	GB		B14	B14	☐	I
POSTAL_STRING	GB		B15	B15	☐	I
POSTAL_STRING	GB		B16	B16	☐	I
POSTAL_STRING	GB		B2	B2	☐	I
POSTAL_STRING	GB		B3	B3	☐	I
POSTAL_STRING	GB		B30	B30	☐	I
POSTAL_STRING	GB		B35	B35	☐	I
POSTAL_STRING	GB		B37	B37	☐	I
POSTAL_STRING	GB		B4	B4	☐	I
POSTAL_STRING	GB		B46	B46	☐	I

Add Record to Zone Remove Record from Zone Rating

Close

In this example, the 'P09_1' location zone incorporates various postcodes (using the prefix as a postal string) for the delivery locations.

The 'Inc/Exc' flag indicates if the type of zone is being included or excluded from the location zone to enable greater flexibility to specify the delivery locations that are valid for the particular location zone.

10.10 Fixed Routes

The fixed routes will apply to the assessment of the own fleet carriers:



Fixed Routes Maintenance ROUTES MAINT v2.44 C-TMS v11.21

Depot: All Depots Day: All ☐ Show Inactive Routes ☐ Auto Scheduled

Route Code	Name	Inactive	Priority	Carrier	Trailer	S	M	T	W	T	F	S	Eff. Date
08:00-BARN	Barnstaple 08:00 to Cherwell 3	☐	1	DHLCHER	13.6 Box	☒	☒	☒	☒	☒	☒	☒	
22:00-BARN	Barnstaple 22:00 to Cherwell 3	☐	1	DHLCHER	13.6 Box	☒	☒	☒	☒	☒	☒	☒	
CAGE AUDIT	NSS CAGE AUDIT	☐	1	DHLLARK		☒	☐	☐	☐	☐	☐	☐	
CHERFRI001	Cherwell Friday Route 001	☐	1	DHLCHER	13.6 Dual	☐	☐	☐	☐	☐	☒	☐	
CHERFRI002	Cherwell Friday Route 002	☐	1	DHLCHER	13.6 Dual	☐	☐	☐	☐	☐	☒	☐	
CHERFRI003	Cherwell Friday Route 003	☐	1	DHLCHER	13.6 Dual	☐	☐	☐	☐	☐	☒	☐	
CHERFRI004	Cherwell Friday Route 004	☐	1	DHLCHER	13.6 Dual	☐	☐	☐	☐	☐	☒	☐	
CHERFRI005	Cherwell Friday Route 005	☐	1	DHLCHER	13.6 Dual	☐	☐	☐	☐	☐	☒	☐	

New Edit Delete Close

Route Detail ROUTES MAINT v2.44 C-TMS v11.21

Detail Audit

Route Code: CHERMON001 Name: Cherwell Monday Route 001 Depart: Cut Off: Sun ☐ Shift Code:
 Depot: DHLCHER1 DHL CHERWELL SITE 1 Cost: Inactive: Mon ☒
 Carrier Id: DHLCHER Priority: 1 Type: Auto Scheduling: Tue ☐
 Trailer Type: 13.6 Dual Max Trips: 1 Calculate Time and Distance: ☒ Wed ☐
 Assign Transport Mode Override Hub Start/End: Fri ☐ Sat ☐

Seq	Stop Type	Region/Zone	Location Id	Location Name	Mand	Fixed	PK/DL	Priority	Offset	Time	Early	Late	Fill Factor
1	Location		DHLCHER1	DHL CHERWELL SITE 1	☒	☐	☐	1	480	08:00	360	180	0.20
2	Location		CA11PHOEPEI	PHOENIX HEALTHCARE L	☐	☐	☐	1	720	12:00	15	15	
3	Location		EH54UNICLM	ALLIANCE HEALTHCARE	☐	☐	☐	2	810	13:30	15	15	
4	Location		G75 PHOEAS	PHOENIX HEALTHCARE C	☐	☐	☐	3	900	15:00	60	60	
5	Location		G42 AAH GLAS	AAH PHARM (GLASGOW)	☐	☐	☐	4	1860	07:00 (1)	15	15	
6	Location		G81 PHOECLY	PHOENIX HEALTHCARE L	☐	☐	☐	5	1920	08:00 (1)	30	180	

Add Crossdock Stop Add Zone Stop Add Loc Stop Add Reg Stop Delete Stop

In this example, the route is being used to collect from, and deliver to, specific locations.

The 'Stop Type' can be specified to include 'Zone' as well as 'Location' to enable orders to be valid for the route without having to specify each location as a stop.

10.11 Schedule Rules

The schedule rules are used to calculate the time windows for the 'PARCEL' orders:



Scheduling Maintenance

SCHED_RULES v1.26
C-TMS v11.21

Schedule Rules | Scheduling Engine | Audit | Top Up

Cost Centre	Customer	Rule	Cut Off	Offset	Early	Late	From Zone	To Zone	Coll Off...	Mode	Service Level
HUK	ACV	STD	19:00	2	07:00	19:00					
HUK	ACV	S24	19:00	2	07:00	19:00					
HUK	ALG	SAT	19:30	3	07:00	19:00					
HUK	ALG	SA3	19:30	3	07:00	19:00					
HUK	ALG	STD	19:30	3	07:00	19:00					
HUK	ALG	SA9	19:30	3	07:00	19:00					
HUK	ALG	SAM	19:30	3	07:00	19:00					
HUK	ALG	SA8	19:30	3	07:00	19:00					
HUK	ALG	P12	19:30	3	07:00	19:00					
HUK	ALG	P09	19:30	3	07:00	19:00					
HUK	ALG	S24	19:30	3	07:00	19:00					
HUK	ALG	P10	19:30	3	07:00	19:00					
HUK	GSK	S24	19:00	2	07:00	19:00					

New Delete Save Close

For example, 'HUK' orders will be provided with an early delivery date and the time windows will be calculated for that date and time.

The 'Rule' is the service level of the order.

The 'Offset' is a number of days for the delivery to be made (i.e. the order must be available 2 days before the delivery date for the 'STD' service level for the 'ACV' customer).

The 'Cut Off' is a time after which a day will need to be added for the expected delivery for it to be made.

Note that the weekends will be offset automatically.

10.12 Location Fixed Route Details

Note: Applies to fixed drop scheduling only.

Each location that can be planned as a destination may have multiple routes (run numbers) assigned to the location.

Action: C-TMS Modules Administration C-TMS Edit Help Window

Locations

LOCATION v2.220
C-TMS v12.47

ID: 35405K Name: TYR-EX LTD

* Active ☐ Inactive ☐ All ☐

Postal Reg: DH Lat: 54.8042 Time Zone: Mon-Thu: -

Planning Reg: NVF Long: -1.57958 Loading Rate: STD LOAD Fri: -

Update Route Unloading Rate: STD UNLOAD Account Profile:

References LOTS EPOD Linked Lat/Long R. Preferred C. DG Pallets Location U. Inventory Information Network WMS Params MCS Route Dtls

Route Code	Drop Number	Depot Number	Bank Holiday
MB11A1	37	982	☐
MB11P	36	982	☐
MBSAT11	53	982	☐
			☐
			☐
			☐
			☐
			☐
			☐

New Location Save Cancel Close Linked Maint



The routes can be specified as being applicable solely to bank holidays.

10.13 Order Time Window Derivation

The time windows can be derived for the orders that are created via the 'XML' and 'CSV' files by assessing the stock being ordered and the service level.

The assessment of the service level and the delivery type will be performed for the orders when they are created via 'CSV' or 'XML' files and the '**MAINTAIN_SCHEDULE_DATES**' system parameter is 'Y' for the cost centre of the order.

The **DU category** of the order is used to decide whether to check the fixed routes for 'PALLET' or the schedule rules for 'PARCEL'.

'PARCEL' will only be specified if the order only contains DU types with a category of 'PARCEL'.

'PALLET' types will assess the fixed routes for a direct or a radial route for the early delivery date, the locations of the order and the mandated carrier if provided.

If the **early delivery date** is known the route will be checked that it is active on that day of the week.

Future early delivery dates will not offset the date:

Service Level *'Standard'*

Delivery Type *'On Sched'*

Early Avail *SYSDATE*

Late Avail *Delivery Date at Late Target Time*

Early Del *Delivery Date at Early Target Time*

Late Del *Delivery Date at Late Target Time*

Or

Service Level *'Standard'*

Delivery Type *'Off Sched'.*

Early Avail *SYSDATE*

Late Avail *Delivery Date at 17:00*

Early Del *Delivery Date at 08:00*

Late Del *Delivery Date at 17:00*

Same day early delivery date may offset the date:

Service Level *'Standard'*

Delivery Type *'On Sched'*

Early Avail *SYSDATE*

Late Avail *Delivery Date at Late Target Time*

Early Del *Delivery Date at Early Target Time*

Late Del *Delivery Date at Late Target Time*

Or



Service Level 'Standard'

Delivery Type 'Off Sched'.

Early Avail SYSDATE

Late Avail Delivery Date + 3 days at 17:00

Early Del Delivery Date +3 days at 08:00

Late Del Delivery Date + 3 days at 17:00

Note that the delivery date may also be offset to avoid the weekends so it may be +4 or +5 days.

Past early delivery date will offset the date:

Service Level 'Standard'

Delivery Type 'On Sched'

Early Avail SYSDATE

Late Avail Delivery Date + 3 days at Late Target Time

Early Del Delivery Date + 3 days at Early Target Time

Late Del Delivery Date + 3 days at Late Target Time

Or

Service Level 'Standard'

Delivery Type 'Off Sched'.

Early Avail SYSDATE

Late Avail Delivery Date + 3 days + 3 days at 17:00

Early Del Delivery Date +3 days + 3 days at 08:00

Late Del Delivery Date + 3 days + 3 days at 17:00

Note that the delivery date may also be offset to avoid the weekends so it may be +4 or +5 days.

No early delivery date will offset the date:

Service Level 'Standard'

Delivery Type 'On Sched'

Early Avail SYSDATE

Late Avail Next Delivery Date at Late Target Time

Early Del Next Delivery Date at Early Target Time

Late Del Next Delivery Date at Late Target Time

Or

Service Level 'Standard'

Delivery Type 'Off Sched'.

Early Avail SYSDATE



Late Avail *Delivery Date + 3 days at 17:00*

Early Del *Delivery Date +3 days at 08:00*

Late Del *Delivery Date + 3 days at 17:00*

Note that the delivery date may also be offset to avoid the weekends so it may be +4 or +5 days.

'PARCEL' types will use the delivery date, cost centre, customer and service level provided (or a default service level from 'OMS_DEFAULT_SERVICE_LEVEL') to assess the schedule rules.

An early delivery date will calculate the collection date using the delivery offset days for the schedule rule:

Early Avail *Collection Date at 00:00*

Late Avail *Delivery Date at Late Time*

Early Del *Delivery Date at Early Time*

Late Del *Delivery Date at Late Time*

No early delivery date will offset the date when before the cut-off time for the SYSDATE:

Early Avail *SYSDATE at 00:00*

Late Avail *SYSDATE + Delivery Offset Days at Late Time*

Early Del *SYSDATE + Delivery Offset Days at Early Time*

Late Del *SYSDATE + Delivery Offset Days at Late Time*

No early delivery date will offset the date when after the cut-off time for the SYSDATE:

Early Avail *SYSDATE at 00:00*

Late Avail *SYSDATE + 1 day + Delivery Offset Days at Late Time*

Early Del *SYSDATE + 1 day + Delivery Offset Days at Early Time*

Late Del *SYSDATE + 1 day + Delivery Offset Days at Late Time*

If SYSDATE is Friday the weekend will be offset at the start for the above calculations when no early delivery date is provided.

Note that the derived delivery date may also be offset to avoid the weekends.

'XML' orders will assess the above rules if not all of the order time windows are provided.

'CSV' orders will assess the above rules if not all of the order time windows are provided.

The delivery type of 'On Sched' and 'Off Sched' can be set for the 'CSV' and 'XML' orders but this code is not run elsewhere, therefore the order should not have changed automatically the delivery type when the order was unscheduled.

10.14 Scheduling using Parcel Carriers

The 'Parcel Carriers' will assess the carriers that have been setup with a 'Carrier Type' of 'PARCEL'.

The orders will be selected provided that the carrier accepts the type of goods that are being transported.

This process will either create a new 'PCL' trip for the order or it will add the order to an existing 'PCL' trip for the same route for the same delivery date minus the number of offset days for the service level.



The **capacity** of the current trip(s) for the route will be assessed against the **total RPE, weight and volume** of the order being processed:

- If there are no trips for the day for the route and the capacity of the trailer will not be exceeded by the order then a new trip will be created.
- If there is spare capacity then the current trip will be used.
- If there is no spare capacity and the total number of trips for the route for the day has reached the maximum number of trips for the route then the order will remain unscheduled.

The schedule of the trips will be based on the early delivery date and time of the order being processed minus the number of offset days for the service level of the order.

Note that the **'PCL' trips** will be handed-off to an external carrier so they will be assigned to a **schedule for a previous day** based on the number of 'Offset Days' for the carrier route for the service level of the order.

The intention is to advise the external carrier when they need to collect the orders from the depot for delivery within their own network.

The orders for the 'Parcel' carriers can be cross-docked prior to their delivery trips.

The 'Auto Processed PCL' flag will be set if the order has been assessed for this aspect of the scheduling engine.

10.15 Scheduling using 3PL Carriers

The '3PL Carriers' will assess the carriers that have been setup with a 'Carrier Type' of '3PL'.

The orders will be selected provided that the carrier accepts the type of goods that are being transported.

The same logic will apply to the '3PL' carriers as to the 'Parcel' carriers and the orders for the '3PL' carriers can be cross-docked prior to their delivery trips.

The 'Auto Processed 3PL' flag will be set if the order has been assessed for this aspect of the scheduling engine.

10.16 Scheduling using Wholesale Schedule

The 'Wholesale Schedule' will assess the fixed routes to potentially cross-dock the orders multiple times prior to delivery.

There are 3 different types of trips that can be assessed for **unscheduled orders**:

- Collection

The orders will be assessed based on the source and delivery locations of the order for any 'Cross-dock' stops that exist for a route.

- Trunk

The orders will be assessed based on the stops for collection from the current location of the order.

- Direct

The orders will be assessed based on the stops for collection from the source location and delivery to the location/zone of the delivery location of the order.

These orders will not be cross-docked.

There are 2 different types of trips that can be assessed for **partially scheduled orders**:

- Trunk

The orders will be assessed based on the stops for collection from the current location of the order.



- Radial

The orders will be assessed based on the stops for collection from the current location and delivery to the location of the delivery location of the order.

The capacity of the current trip(s) for the route will be assessed against the total RPE, weight and volume of the order being processed to decide if a trip can be used:

- If there are no trips for the day for the route and the capacity of the trailer will not be exceeded by the order then a **new trip** will be created.
- If there is **spare capacity** then the **current trip** will be used.
- If there is **no spare capacity** and the total number of trips for the route for the day has reached the **maximum number** of trips for the route then the order will **remain unscheduled**.

Note that is a '**PARCEL**' order is being processed, it **can be added to a 'RTE' trip** but it **cannot create a 'RTE' trip**.

The schedule of the '**RTE**' trips will be based on the **schedule for the early delivery date and time** of the order being processed.

The orders for the 'Wholesale' carriers can be cross-docked prior to their delivery trips.

The 'Auto Processed WS' flag will be set if the order has been assessed for this aspect of the scheduling engine.

10.17 Scheduling using Mandated Carrier

The orders that have a mandated carrier in the 'Carrier' field will be assessed for the appropriate '3PL', 'Parcel' or 'Wholesale' aspects of the scheduling engine depending on the 'Carrier Type' of the mandated carrier:

In this example, 'DHLTD' must be used to deliver the order.

10.18 Scheduling using Top Up Process

The 'Top Up Process' has parameters that can be used to decide which orders can be used to 'top-up' which trips:



The delivery location of the order will be used to assess onto which trip the order can be added and trunk trips can be created to ensure that the order is transported between depots in time for the departure of the delivery trip.

The 'Master' locations will be suitable to ensure that the same location code is used in the different networks for the different cost centres for the orders.

The 'Network Schedule' will be used to schedule orders between for collection into depots and delivery out of depots, or direct deliveries between supplier and customer locations, using the fixed routes and carrier routes.

The 'NHSBT Schedule' is a specific process to assess the fixed routes and add orders to the trips that have been created for the fixed routes.

⚠ Warning: This is an incomplete guide.

The fixed drops are stored against each location.

The orders received MUST include an order reference "RUN_NUMBER" set to a valid route code, and that fixed route MUST have a route end time.

The process can schedule:

- Desk collection jobs onto DSK trips
- Collection/Delivery radial jobs onto fixed route trips labelled as RTE trips (the prefix is configurable through system parameters).
- Trunk movements between depots
- 3rd-party trips routed onto trips labelled as 3PL trips.

Each RTE trip created will be marked with the fixed drop number (visible in the planning screen). Jobs will be placed on the trips in drop number sequence. CL stops will be marked as drop number 999, whilst any jobs automatically planned onto these trips by the route number will be marked as drop 998.

10.22 Scheduling Engine Processing

The different aspects of the scheduling engine will be run in sequence as described above.

Only the orders that have not been marked for manual scheduling, or that have previously been processed automatically, will be processed if the cost centre and the customer allow automatic scheduling.

10.23 Pack Confirmation/Labelling

There are 2 methods of scheduling the order ready for when it is being picked and packed and labelled:

- C-TMS Pack Confirmation

A 'Pack' button can be pressed in the 'Order Summary' and 'Order Details' screens to schedule the order and then print a label to a default printer (for the user and also for the carrier for the user).

These 'Pack' buttons are designed to be used for orders that have been entered manually in C-TMS rather than in the source warehousing system.

Note that the orders can be scheduled automatically when the scheduling engine is running and the orders can be scheduled without delay because the scheduling threshold will not apply to this packing process.

- WMS Pack Confirmation

A pack 'XML' file can be generated from the source WMS system (e.g. 'SAP') to pack the order and print a label optionally.

A pack 'CSV' file can be generated from the source WMS system (e.g. a 'CIPD' file from 'Unison') to pack the order and print a label optionally.

The EDI parameter 'PRINT_LABEL' must be set to 'Y' for a label to be printed to either the advised printer or a default printer for the user.

Note that the order for such pack confirmation must already be scheduled for the label to be printed in the required format for the carrier of the delivery trip.

- Print Label

All of the labels, or a selection of the labels, may be printed or reprinted in the 'Print Label' screen in C-TMS.

However, a fresh set of the labels will be printed via the generation of a new pack 'XML' file from the source WMS system.

10.24 Tracking References

The tracking references will be generated for the labels as they are printed.



These tracking references will be printed on the labels and they will be used by the external carriers for tracking the items for the orders as they are being delivered.

Each carrier can have its own format and sequence numbers so that the labels and the tracking references are unique for that carrier.

The tracking references will be stored against the carton numbers if the order is packed via a 'CSV' file called 'CIPD' from 'Unison'.

The tracking references may be displayed in the 'Print Label' screen in the 'Orders' screen:

Typ	Tracking Ref	Carton Number	Label	of	Total	Sel
D	JD000226320000287051	1	1	of	1	☒
S	4691267641		1	of	1	☐
						☐
						☐
						☐
						☐
						☐
						☐
						☐
						☐
						☐
						☐

Label Printer Name: ☐ Use Default Printers

10.25 Unscheduling Orders

If an order is unscheduled from its delivery trip, the existing tracking references will be removed because the order will have to be potentially repacked and relabelled when it is rescheduled in case a different carrier is used to deliver the order.

The 'Manual Schedule' flag will be set to indicate that the order will not be reprocessed automatically by the scheduling engine to ensure that the order is not simply rescheduled onto the same trip.

10.26 Manual Trip Planning

The orders can be scheduled manually if they have failed to schedule automatically or they have been unscheduled for replanning.

The same rules can be applied for the manual planning to ensure that the order can be taken by the carrier, the 'TRIP_VALIDATE_PARCEL_ORDER_ASSIGNMENT' system parameter will control this validation when it is set to 'Y'.

The 'TRIP_PREVENT_PARCEL_CARRIER_ASSIGNMENT' system parameter can be used to prevent orders being assigned to trips for 'Parcel' carriers when it is set to 'Y'.



10.27 CITD Files

Files can be generated for the 'Unison' source WMS system to return the tracking references for storage against the packs that have been created there.

The file can be triggered when the trip status is updated to 'ACCEPTED' and the order has been packed in 'Unison' and a carton number has been provided.

10.28 Despatch Confirmation

A check can be performed when the trip is despatched in the trip planning screens to ensure that all of the orders on the trip have been fully packed.

The system parameter 'X' will control this validation for the trips for the external carriers.

Note that the unpacked orders will have to be unscheduled or packed before the trip can be despatched.

10.29 Physical Manifests

A physical manifest may be printed when the trip is updated to 'EN-ROUTE' status.

The physical manifest will be printed to the default printer for the user if the carrier of the delivery trip is setup to print a report.

10.30 Electronic Manifests

An electronic manifest may be generated as a 'XML' file when the trip is updated to a specified status and/or when it is updated to 'EN-ROUTE' status.

The trip status may be specified as an EDI parameter called 'STATUS' (e.g. 'PLANNED' and 'TENDERED').

Some carriers (e.g. 'Polarspeed') cannot accept multiple files for the same order so they will only send a single electronic manifest when the trip is 'EN-ROUTE'.

Other carriers will accept multiple updates as the trip is planned with more orders and when those orders are packed differently.

Only the changes since the last file was generated will be included in the next file for the specified trip status.

10.31 Paragon Considerations

There are limitations for using Paragon to plan all of the orders rather than to plan the orders for the own fleet and then allow the scheduling engine to plan the remaining orders and the orders that have been mandated for an external carrier:

- Paragon will need to assess the individual gazetteer data for the external carriers.
- Paragon will need to assess the shipment size, DU type and product type for the external carriers.
- Paragon will need to derive the carrier service level for the carrier based on the service level of the order.
- Paragon will need to ensure that a mandated carrier is used.
- Any orders that have been printed and that have generated a tracking reference will lose those references if they are unscheduled (which is what Paragon does to respin a trip).
- Some of the labels display a 'Trip ID' so they will need to be reprinted if the order is rescheduled (e.g. 'Standard', 'Penguin').
- Some of the labels display data from the carrier route code name and this route code will not be provided by Paragon (e.g. '(EMA)' and '(OXF)' are translated as the origin code for the DHL Express labels).



- The trip stop times will not be calculated for the external carriers based on the time windows of the orders on the stops but they will be calculated based on the distance and time from the previous stop.
- The trip stop times are used to advise the external carrier when the orders will be delivered in their network via the 'Electronic Manifest'.
- Files may be generated for the 'Electronic Manifest' when the orders are unscheduled temporarily.

10.32 Depot Sweep Processes

 **Warning:** This is an incomplete guide.

The Depot Sweep EDI processes can move orders between schedules automatically if not completed.

These processes are most commonly associated with fixed drop scheduling and are useful for Paragon planning, as the schedule is linked to the Paragon working area for each day.

The fundamental principles are:

- Part of scheduling engine
 - ♦ Any order that cannot be planned to look for a further run on that day and automatically plan instead. The process will check the routes and change the order reference to plan onto a different run, reset the manual schedule flag and let the next schedule engine run pick it up. If no runs found on that day, then remains unscheduled (and will be carried forward on planning day end).
- Planning Day end
 - ♦ Any orders of any type not fully planned at the end of the day carried forward to next day (including non-working days). The scheduling engine process above will then pick up the order and plan according to the rules above.
 - ♦ Expected to be scheduled process once per day, on or around 1830-1900.
- Actual day end
 - ♦ Any DSK (Desk Collections) orders that have not been completed (debriefed) at end of day to carry forward to next day and planned automatically onto the next DSK collection trip.
 - ♦ Reset any TODD orders and next day orders that remain unscheduled.
 - ♦ Expected to be scheduled process once per day, around (before) 2359.

This is the definition of the automated scheduling and carry-forward rules. It will also be possible to carry an order forward manually (for example, when determining on Monday that you will not deliver until Thursday, you can carry the order forward to Thursday's schedule manually from the planning screen.

The depot sweep processes can be configured with parameters to control which depot is affected by the process, what route types are affected and what action to take, as shown below:

Parameter	Value	Purpose
DEPOT_SWEEP	Y	Identifies that the EDI process is to perform the depot sweep.
DEPOT	blank or RDC location	Identifies the depot that is affected by this depot sweep, or all depots if blank.
ROUTE_TYPE	COLLECT_DESK	Identifies that the EDI process will assess the orders for the collection desks based on the run number of their route.
ROUTE_TYPE	RADIAL	Identifies that the EDI process will assess the orders for collection from the customers or for delivery to the customers based on the run number of their route.
ACTION	CARRY_FORWARD	Identifies that the EDI process will assess the orders and carry forward any unscheduled orders to the next day.
ACTION	RESCHEDULE	Identifies that the EDI process will assess the orders and unschedule any incomplete orders from their incomplete trips and carry forward any unscheduled orders to the next day.

 **Note:** The Route Type can include a list of types of routes that are separated by a comma.



10.33 Potential Developments

There are potential developments to enable the scheduling engine to be more specific for the operations:

- Include a matrix for the deliveries for the own fleet for the carrier routes and fixed routes to indicate when the location will accept the order.
- This matrix would be used to set the order time windows to use the next delivery date for the location should an invalid delivery date be provided.
- The gazetteer data can be assessed instead of the carrier routes if appropriate routes and zones cannot be maintained effectively.



11 Scheduling Maintenance

The Schedule Maintenance screen defines several items:

- Schedule Rules
- Scheduling Engine Processes.
- Top-up
- Delivery Schedule.

11.1 Schedule Rules Tab

You can maintain the schedule rules here.

Schedule rules determine collection and delivery windows for orders based on the service level, customer, cost centre and zones of the source and destination location of the order.

Cost Centre	Customer	Rule	Cut Off	Offset	Early	Late	From Zone	To Zone	Coll Offset	Del Offset	Mode
POLAR-CC	CLARITY	S12	16.00	0	07.00	12.00	LBZ_F_S1C	BRM_C_S1	0	1	
POLAR-CC	CLARITY	S24	16.00	0	07.00	19.00	LBZ_F_S1C	SCO_A_S1	0	1	
POLAR-CC	CLARITY	S10	16.00	2	07.00	10.00	LBZ	BAM	1	1	
POLAR-CC	CLARITY	S10	16.00	0	07.00	10.00	LBZ	SCO	0	1	
POLAR-CC	CLARITY	S10	16.00	0	07.00	10.00	LBZ	NEW	0	1	
POLAR-CC	CLARITY	S10	16.00	0	07.00	10.00	LBZ	LEE	0	1	
POLAR-CC	CLARITY	S10	16.00	0	07.00	10.00	LBZ	COA	0	1	
POLAR-CC	CLARITY	S10	16.00	0	07.00	10.00	LBZ	ANG	0	1	
POLAR-CC	CLARITY	S10	16.00	0	07.00	10.00	LBZ	KEN	0	1	
POLAR-CC	CLARITY	S10	16.00	0	07.00	10.00	LBZ	POM	0	1	
POLAR-CC	CLARITY	S10	16.00	0	07.00	10.00	LBZ	SWA	0	1	
POLAR-CC	CLARITY	S10	16.00	0	07.00	10.00	LBZ	BRI	0	1	
POLAR-CC	CLARITY	S10	16.00	0	07.00	10.00	LBZ	EXE	0	1	

To create a record, you must define the following information:

- Cost Centre - will be matched to the cost centre on the order
- Customer - will be matched to the customer on the order
- Rule - name for the rule record
- Cut off - if an order is entered after this time, 1 day is added to each offset date
- Offset - delivery offset which identifies the number of days added to the current date for the delivery window.
- Early Time - used to set the early del window time
- Late Time - used to set the late avail and late del window time
- Service Level - will be matched to the service of the order
- From Zone - will be matched based on the from location of the order falling within the Zone
- To Zone - will be matched based on the to location of the order falling within the Zone
- Coll Offset - collection offset which identified the number of days added to the current date for the collection window.
- Del Offset
- Mode
- Exc

When adding a new order, a function will access this table and return the relevant collection and delivery windows for the order, where a matching record is identified.

A record should be added to the schedule rules for every customer, cost centre combination covering the available zones. Zones may be created specifically for this table or existing Zones created for the scheduling engine or Finance charging may be re used. This table will only cover Standard service levels.

You can also import schedule rules through [Imports](#):



- **SCHED_RULES**

11.2 Scheduling Engine Tab

You can configure which scheduling engines are running from this screen, and start or stop the scheduling engine process with the provided buttons. When starting, you can specify a number of minutes. Usually 3 to 5 minutes is often enough for this automatic scheduling process.

Scheduling Process	Included	Run Order	Incl On Cust Drop	Unplanned Order Email
Dedicated Haulage Schedule	☒	12	☒	☒
Home Delivery Network Schedule	☒	1	☐	☐
Mandated Carrier	☐	10	☐	☐
Parcel Carriers	☐	10	☐	☐
Wholesale Schedule	☐	10	☐	☐
3PL Carriers	☐	10	☐	☐

Start Scheduling Engine [] minutes

Stop Scheduling Engine RUNNING

New Delete Save Close

You can choose the following for each process:

- Included - whether this process is included in the run.
- Run Order - what order to run the included processes, smallest number first.
- Incl on Cust Drop
- Unplanned Order Email - an email address to send an email to if an order lands and is not planned by the scheduling engine.

The available processes are:

- Dedicated Haulage Schedule
- Top Up Process
- Network Schedule
- NHSBT Schedule
- Dedicated Haulage Schedule
- Home Delivery Network Schedule
- Mandated Carrier
- Parcel Carriers
- Wholesale Schedule
- 3PL Carriers
- Baxter Trunks
- Van Fleet

11.3 Audit Tab

You can see auditing generated from the automatic scheduling engine process on this tab.



Warning: This is an incomplete guide.

[illegible]

 **Warning:** This is an incomplete guide.

11.6 Further Configuration

The following system parameters affect this functionality:

Parameter	Description	Level
AUTO_SCHED_INACTIVE_DEPOTS	List the inactive depots to exclude from the fixed drop scheduling engine.	SYSTEM
ENGINE_RUNNING	Indicates whether the Scheduling Engine is running	SYSTEM
OMS_RESET_AUTO_PROC	Will the auto-processed flags of the order for the scheduling engine be reset when the early delivery date and time is changed? (Y/N)	COST_CENTRE
SCHED_ENG_PART_PLAN	Will the network scheduling engine allow orders to be partially planned?(Y/N)	COST_CENTRE
SCHED_EXC_SI	Exclude order with special instructions from engine	COST_CENTRE
TRM_EXCL_TIME_VALIDATION	Indicates if the available time of an order is not compared to the cut-off time for TRUNK or LINEHAUL routes in the network scheduling engine (Y/N).	SYSTEM
TRM_LOC_RADIAL_ROUTES	Indicates if a radial route that is stored for the location will be used in the scheduling engine instead of the location zones (Y/N).	SYSTEM
TRM_OFFSET_PUBLIC_HOLIDAY	Indicates if the order time windows and the scheduling engine will be offset for the public holiday at the country, depot or route level (Y/N).	SYSTEM
AUTO_SCHEDULING	Auto Scheduling of orders	COST_CENTRE
ORD_OMIT_PACK_SCHEDULING	Omit the scheduling of the order and only print the label when pack confirming.	COST_CENTRE
ORD_ON_SCHED_DEL_LOC	Du category to be assessed for exclusion from parcel scheduling	CUSTOMER
TRM_EXCL_REG_AUTO	Planning Regions to be excluded from Auto Scheduling	COST_CENTRE



12 SHIPMENT

 **Warning:** This is an incomplete guide.



13 Static Data

The Static Data module encompasses the maintenance of static data used by the system.

The data can be viewed, created, edited and maintained through the accompanying Static Data Maintenance Maintenance form.

You can access the screen through the Maintenance menu.

13.1 Tabs

13.1.1 Region Data

This tab allows for the maintenance of region data:

Country Code	Postal Region	Planning Region	Alt Country Code
GB	A	SCO	
GB	AB	SCO	
GB	AL	LBZ	
GB	B	BRM	
GB	BA	BRI	
GB	BB	PRE	
GB	BD	PRE	
GB	BH	POM	
GB	BL	PRE	
GB	BN	KEN	
GB	BR	KEN	
GB	BS	BRI	

You can maintain the grouping of postal regions to planning regions.

Entries in this table control the setting of the 'Planning Region' against new locations. As new locations are created the Postal Region is set based on the Postcode stored against the address data.

The Postal Region can be dynamic based on the postcode format of the country - for the UK it takes the first 'character' based portion of the postcode e.g. L or BR.

The Postal Region from the location is then used to reference the matrix as entered in the Region Data tab and ascertain the correct Planning Region to store against the Location. It allows the grouping of one or more Postal Regions into a single Planning Region. An individual Postal Region cannot exist in more than one Planning Region.

The Planning Region can then be used in the planning process to filter the Order Well based on collection and delivery locations.

There are five buttons at the bottom of the screen:

- **New** - Allows you create a new region.
- **Delete** - Delete an existing region.
- **Cancel** - Do not save any changes.
- **Save** - Save any changes that you have made.
- **Radial Routing** - Edit Radial Routing. Here you can add the type of radial routing (Collection, Delivery, Both or None), and the location types that are affected by this rule. This is optional.



You can also import Region data through **Imports**:

- **REGION_DATA**

13.1.2 Region Depot

This tab allows for the maintenance of region depot data:

Planning Region	Depot	Group Name	Origin Port	Cost Centre	Priority
BAM	BAM			POLAR-CC	
BRM	BRM			POLAR-CC	
COA	COA			POLAR-CC	
EXE	EXE			POLAR-CC	
LBZ	LBZ			POLAR-CC	
LEE	LEE			POLAR-CC	
NEW	NEW			POLAR-CC	
POM	POM			POLAR-CC	
PRE	PRE			POLAR-CC	
SCO	SCO			POLAR-CC	
SWA	SWA			POLAR-CC	
ANG	ANG			POLAR-CC	

You can define the depots that are responsible for each planning region.

Entries in this table control two C-TMS functions:

- Scheduling Engine - identifying applicable Fixed Routes
- Order creation - setting the group name

Planning Region to Depot matrix - defines which planning region areas (and ultimately groups of location addresses) are under the control/responsibility of a particular depot. One or more Planning Regions can be added under the control of a particular depot. This is largely for the identification of applicable Fixed Routes in automatic planning.

Planning Region to Group Name matrix defines which Group Name should be stamped against an order during any none manual order creation (e.g. Specific EDI flows, Portal etc). The order locations are used to identify the Planning Region of the Collection/Delivery location and the appropriate Group Name is identified. This ultimately controls the order visibility in the Planning Well depending on the user parameter configuration.

There are four buttons at the bottom of the screen:

- **New** - Allows you create a new region depot.
- **Delete** - Delete an existing region depot.
- **Cancel** - Do not save any changes.
- **Save** - Save any changes that you have made.

You can also import Region Depot assignment data through **Imports**:

- **REGION_DEPOT**



13.1.3 Order Type

Warning: This is an incomplete guide.

The screenshot shows the 'Static Data Maintenance' window with the 'Order Type' tab selected. The window has a title bar with 'Static Data Maintenance' and a status bar with 'STATIC DATA MAINT v1.27' and 'C-TMS v12.45'. The main area contains a table with columns 'Order Type' and 'Send Ack'. Below the table are buttons for 'New', 'Delete', 'Cancel', and 'Save'. At the bottom of the window is a 'Close' button.

There are four buttons at the bottom of the screen:

- **New** - Allows you create a new order type.
- **Delete** - Delete an existing order type.
- **Cancel** - Do not save any changes.
- **Save** - Save any changes that you have made.

13.1.4 Booking Type

Warning: This is an incomplete guide.

The screenshot shows the 'Static Data Maintenance' window with the 'Booking Type' tab selected. The window has a title bar with 'Static Data Maintenance' and a status bar with 'STATIC DATA MAINT v1.27' and 'C-TMS v12.45'. The main area contains a table with columns 'Booking Type', 'Decode', 'Prod Type', 'DU Type', 'Cost Centre', and 'Customer'. Below the table are buttons for 'New', 'Delete', 'Cancel', and 'Save'. At the bottom of the window is a 'Close' button.

There are four buttons at the bottom of the screen:



- **New** - Allows you create a new booking type.
- **Delete** - Delete an existing booking type.
- **Cancel** - Do not save any changes.
- **Save** - Save any changes that you have made.

13.1.5 Order Terms

This tab allows you to maintain order terms. These are added to reports that support them.

Static Data Maintenance

STATIC DATA MAINT v1.27
C-TMS v12.45

Region Data Region Depot Order Type Booking Type **Order Terms** Location Group Name Report Terms Configuration

Ensure to take a new line for each Order Term using the Return key. No font formatting (bold/italic/boxed text) will be displayed on the report.
To convey important terms use BLOCK CAPITALS or put a dashed line before and after the term.

Terms

Last Updated Date Last Updated By

Cancel Save

Close

There are two buttons at the bottom of the screen:

- **Cancel** - Do not save any changes.
- **Save** - Save any changes that you have made.

13.1.6 Location Group Name

⚠ **Warning:** This is an incomplete guide.



The screenshot shows the 'Static Data Maintenance' window with the 'Location Group Name' tab selected. The window has a title bar with 'Static Data Maintenance' and a status bar with 'STATIC DATA MAINT v1.27' and 'C-TMS v12.45'. The main area contains a table with two columns: 'Group Name' and 'Location ID'. Below the table are four buttons: 'New', 'Delete', 'Cancel', and 'Save'. At the bottom of the window is a 'Close' button.

Group Name	Location ID

There are four buttons at the bottom of the screen:

- **New** - Allows you create a new location group name.
- **Delete** - Delete an existing location group name.
- **Cancel** - Do not save any changes.
- **Save** - Save any changes that you have made.

13.1.7 Report Terms Configuration

This tab allows you to maintain report terms. These are added to reports that support them.

The screenshot shows the 'Static Data Maintenance' window with the 'Report Terms Configuration' tab selected. The window has a title bar with 'Static Data Maintenance' and a status bar with 'STATIC DATA MAINT v1.27' and 'C-TMS v12.45'. The main area contains a 'Report' dropdown menu and a 'Report Title' text box. Below these are four large text areas: 'Header Address', 'Supply Chain Address', 'Footer 1', 'Footer 2', 'Footer 3', and 'Footer 4'. At the bottom are four buttons: 'New', 'Delete', 'Cancel', and 'Save'. At the very bottom is a 'Close' button.

There are four buttons at the bottom of the screen:

- **New** - Allows you create new report terms.
- **Delete** - Delete existing report terms.
- **Cancel** - Do not save any changes.
- **Save** - Save any changes that you have made.



14 Initial Setup Guide



15 Set Up C-TMS

 **Warning:** This is an incomplete guide.

15.1 Initial Setup

Start using the OBS Administrative user

15.2 Basic Setup

1. Set up the Cost Centre. This should not be the same name as the customer group or the customers. Convention is to end it with "-CC". Ensure that it is not more than 10 characters (C-ePOD limitation).
2. Set up the Customer Group - this is used to ring-fence Customers and Locations.
3. Customer - create each customer (supplier) for the implementation, accepting the defaults generally. Link these customers to the customer group.
4. Planning Group - from Business Data/Group Names, set up a planning group. This is used to group orders and filter the order well.

15.3 Geographical

1. Location Types - work out and create the location types for the contract. "RDC" must be used for depots. "BRANCH" is usually good for deliveries to primary transport to customer distribution centres, "HOME" for home deliveries, "SUPPLIER" for customer locations, etc. Only "RDC" is absolutely required.
2. Locations - Set up Locations by entering the Location Name, Address and assigning to the correct location type. Lat/Long and Timezone will be entered automatically if required. Ring-fence to the customer when creating, or select ALL if they apply to all customers (e.g. cross-dock depots within the transport network). At least the depots are required. Set loading rates. Default to Standard Load/Unload.
3. Regions and Region Depots should be setup, as shown below.

15.3.1 Regions and Region Depots

Owning Depot is defined as the depot that is responsible for planning a trip, and is used by access control to determine whether a planner should see an orders or trips for planning.

This logic depends on the creation of the following data:

- Create planning regions through postcode.
- Use [Static Data](#) Region Depot to link a planning region to a depot.
- Set up planning regions by postal region i.e. "L" could be assigned to a region "GBLIV" or "GBNW".

Locations created are automatically assigned to the planning region based on the postcode.

The postcode is extracted according to the rules applied against the [Countries](#). So, for GB, the postal region is extracted. For example, for a location with an address "L24 1XZ", the postal region "L" is extracted, and for postcode "NG6 8UZ", the postal region is "NG" (Nottingham).

If you want to change this automatic assignment, this can be done in the CTMS [Locations](#) screen - change the planning region in the screen against the location and tick "Retain Planning Region" before saving - the new region will be saved and the system will not automatically reset it.

Users can then be assigned a default depot through [Access Control](#). Your user can be based at a single depot (set through the BASED_AT user parameter), or your user can have access to all depots (set through the ALL_DEPOTS user parameter).



When a user has an assigned depot, most screens will automatically filter the data shown in the screens to show only the data matching the planning region or default depot. For example, the **Planning** screen will only show orders in the unscheduled order well from the planning regions owned by your depot, and trips from, to or through that owning depot configured against the user using the screen.

15.4 Admin User for the Customer

1. Using Access Control, create the admin user required just for that customer/transport network. Usually, this is easier to copy another user first.
2. Restrict the user to the home depot for that customer.
3. Assign the user to the correct group - usually, this user is the Admin user, and should be assigned to the already-existing ADMIN group.
4. Switch to this user now and test access is OK.

15.5 Resources

Set up the following:

1. DU Types
2. Carrier Groups
3. Carrier Types
4. Carriers
5. Carrier rules for restrictions, DUs and product types
6. Trailer types
7. Tractor/Trailer or Vehicles
8. Drivers
9. Delivery Types/Service Levels - use Standard if there are no specific requirements.
10. Products - link to default DU types, and loading rates. Default to Standard Load/Unload.

The user can now be restricted to carrier, and system defaults for DU types and Product Types can be set up.

15.6 Accounts

1. Set up an Account for:
 1. Customers
 2. Cost Centre
 3. Carrier
2. Set up Invoicing Requirements for the customer.
3. Set up Currency per customer and carrier.
4. Set up a contract between:
 1. Cost Centre and Customer, for revenue. Note that a contract **MUST** be set up for an order to be valid, or you will not be able to change the order status.
 2. Cost Centre and Carrier, for trip cost.
5. Set up Tariffs as required. Basic distance, with this revenue being slightly higher per mile than the trip cost, usually provides good demo results. e.g. 60p/75p per mile.

At this point, the system will be capable of being used to create orders and trips.

15.7 Bespoke Setup

- Cross-dock Paths
- Fixed Routes
- Fixed Schedules
- Additional Users and User Groups - adjust the Menus and Tabs required on the group if required.
- Execution systems/interfaces:
 - ◆ C-ePOD
 - ◆ Microlise SmartPOD



- ◆ TomTom WEBFLEET
- ◆ FlexiPOD
- C-PORTAL TTM

15.7.1 Fixed Routes

Parameters:

- AUTO_SCHEDULING must be configured to "Y" for the cost centre

15.7.1.1 Domestic/Home Delivery

For a domestic-style delivery mode (JIT planning, plan to final depot and then wait for final mile planning):

Parameters:

- TRM_LOC_RADIAL_ROUTES - "N"

Schedule Rules:

- Set the scheduling engine to "Home Delivery Network Schedule"
- Start the scheduling engine (3 minutes for testing, up to 5-15 for live)

Zones:

- Set up zones to go from each depot's catchment areas to every other depot.

Locations:

- Set preferred carrier up against each RDC, typically every carrier that will pass through that location, but definitely ones that originate routes at that location.

Routes:

- Auto-processing, defined depot, trailer type, defined carrier, execution days, number of trips. Ensure that the MODE is set to TRUNK (or some other desired mode).
- Stops:
 - ◆ Stop 1 - Location, Depot from which orders are currently based, all Mand, Fixed, PK and DL ticked, offset (number of minutes from midnight), Early and Late set to some minutes before/after the offset e.g. 90, Fill factor 1.0, PK cutoff half an hour before.
 - ◆ Stop 2 - cross-dock stop, Zone for orders, location to cross-dock through, Mand and DL ticked, offset, Early and Late..
 - ◆ Repeat for return or onward journey.

Monitoring:

- Use the Schedule Rules Audit tab and refresh.

15.7.2 C-ePOD Settings

EPOD settings on:

- Customer
 - ◆ EPOD Enabled ticked on EPOD Params tab
- Location Type - Default settings for locations of this type:
 - ◆ Send EPOD Job Load/Unload - tick to send the jobs at location stops of this type to ePOD
 - ◆ Consol EPOD Job Load/Unload - tick to consolidate the jobs at location stops of this type where the location is the same.
 - ◆ Send EPOD Dets Load/Unload - tick to send the item details of jobs at location stops of this type to ePOD
 - ◆ EPOD Job Group Load/Unload - tick to set a specific job group to EPOD for jobs at locations of this type.
- Location - override the defaults above from the EPOD tab:



- ◆ Send EPOD Job Load/Unload - tick to send the jobs at location stops of this type to ePOD
- ◆ Consol EPOD Job Load/Unload - tick to consolidate the jobs at location stops of this type where the location is the same.
- ◆ Send EPOD Dets Load/Unload - tick to send the item details of jobs at location stops of this type to ePOD
- ◆ EPOD Job Group Load/Unload - tick to set a specific job group to EPOD for jobs at locations of this type.
- Carrier
 - ◆ EPOD Enabled ticked
 - ◆ Auto Debrief Col set to "N". For customer-collect carriers, set this to "Y".
 - ◆ Auto Debrief Del set to "N". For customer-collect carriers and some 3rd-party carriers with no debrief process, set this to "Y".
 - ◆ Send to ePOD Col set to "Y"
 - ◆ Send to ePOD Del set to "Y".
- Carrier Group
 - ◆ If a different ePOD Site is required per carrier, set the EPOD Site here. Depends on System Parameters as to whether this is sent.
- Drivers
 - ◆ Set EPOD User.

A job is required for the sending of tasks to C-ePOD, and a webservice is required to pick up the updates.

There are also many system parameters controlling the function of EPOD - search for EPOD in the parameter name.

Name	Level	Description
EPOD_COMPLETE_ON_RTD	COST CENTRE	Complete Trip when RTD job sent back from epod
EPOD_CONSOLIDATION_LEVEL	COST CENTRE	Level of job consolidation for epod
EPOD_DEPOT_JOBS	SYSTEM	EPOD Debrief jobs which load at or deliver to RDC locations
EPOD_ENROUTE_COLLECTIONS	SYSTEM	Set Trip to En-Route via ePOD Interface
EPOD_JOB_GROUP_FORMAT	SYSTEM	Indicates whether the value passed in the EPL Job Group to EPOD is the Cost Centre (CC), Carried ID (CI), Customer Group (CG) or Customer (CU).
EPOD_SET_ACTUAL_SIGNATORY_BLANK	SYSTEM	Set EPOD actual signatory to blank (Y/N)?
EPOD_SITE_ID_FORMAT	SYSTEM	Indicates whether the value passed in the EPL Site ID to EPOD is the Database Name(DB), Cost Centre (CC), Carrier ID (CI) or Carrier Group (CA).
EPOD_VIEW_POD_URL	SYSTEM	URL for EPOD Documents
EPOD_WS_ADDRESS	SYSTEM	EPOD Web Service End Point
EPOD_WS_MESSAGE_FORMAT	SYSTEM	EPOD message format - can either be PARCEL or BULK to define where fields are sent in the web service message. MODE1 for LFS, MODE2 for general usage (NHSBT)
EPOD_WS_PASSWORD	SYSTEM	EPOD Web Service Login Password
EPOD_WS_TIMEOUT	SYSTEM	Number of minutes before a WS message will be set to Held
EPOD_WS_USERNAME	SYSTEM	EPOD Web Service Login Username

15.7.3 C-PORTAL TTM Settings

Predominantly against the customer.

