Aptean Proof of Delivery - *Calidus* Edition

CALIDUS ePOD/eSERV Interfaces

CALIDUS ePOD

24th March 2021 - 4.5.00.18
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1 Functional Description

This guide will help you through the end-to-end process of the consolidation and de-consolidation of jobs.

1.1 Overview

Consolidation is the process of identifying multiple jobs that the driver can complete at the same time in the mobile device application. Usually, the jobs that can be consolidated are to the same customer or same address, but not necessarily so. For example, when making multiple deliveries in the same building, the customers may be different, but they are all delivered to the same gatehouse. Conversely, jobs to the same address may not require consolidation, for example deliveries to a hospital, where the driver must deliver these to different departments.

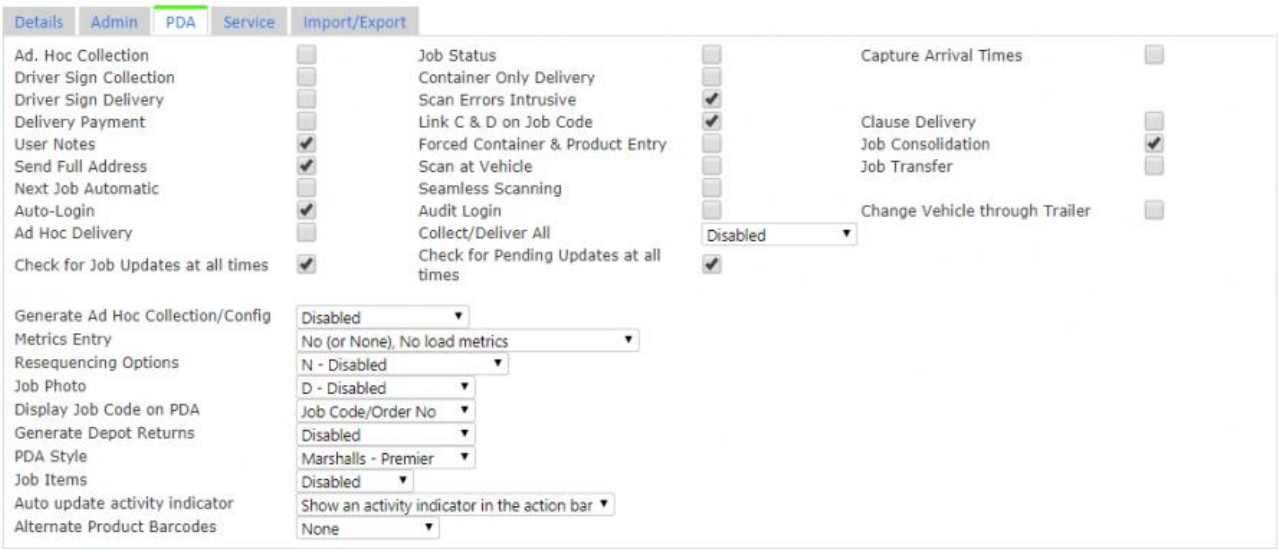
De-consolidation is the act of breaking a consolidation, or breaking items or jobs out so that the driver can deliver them separately. In the examples above where you have consolidated jobs to one address, the driver may then find that some of the items or jobs must be delivered to a different place. In this case, the driver has options to break these jobs or items out of the consolidation and do them separately.

1.2 Configuration

You can set the site setting for Job Consolidation to allow all jobs to be consolidated manually by the driver on the device.

Note: If you do not set this, the application will check the job group setting.

This is through the Admin Site Maintenance screen.



Site Consolidation Setting

You can set the job group setting for Job Consolidation to allow all jobs specifically for that Job Group to be manually consolidated by the driver on the device.

Note: If you set this, this overrides the site setting.

This is through the Admin Job Groups Maintenance screen.

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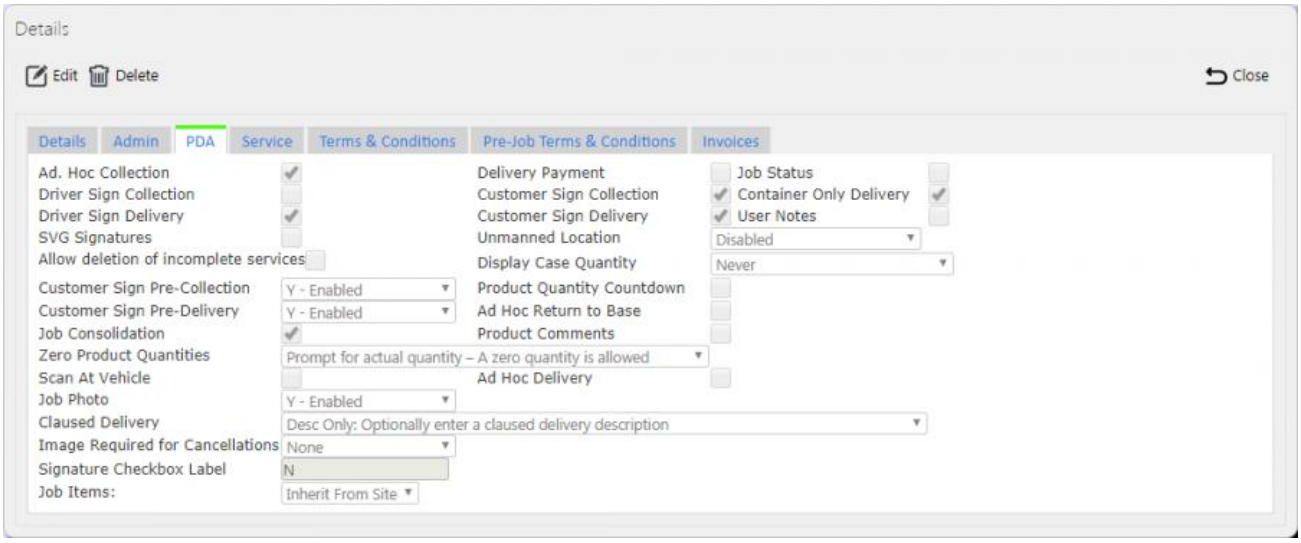


Job Group Consolidation Setting

1.3 Consolidating Jobs to/from External Systems

Whenever an external system sends loads and jobs to *CALIDUS* ePOD, they can indicate whether the jobs should be consolidated in the interface, by setting a unique *Linked ID* against jobs in the load.

So, if the load has 5 jobs with the following *Linked IDs*:

Job	Sequence	Linked ID
Job1	1	
Job2	2	1
Job3	3	2
Job4	4	1
Job5	5	2

The mobile device will display this as:

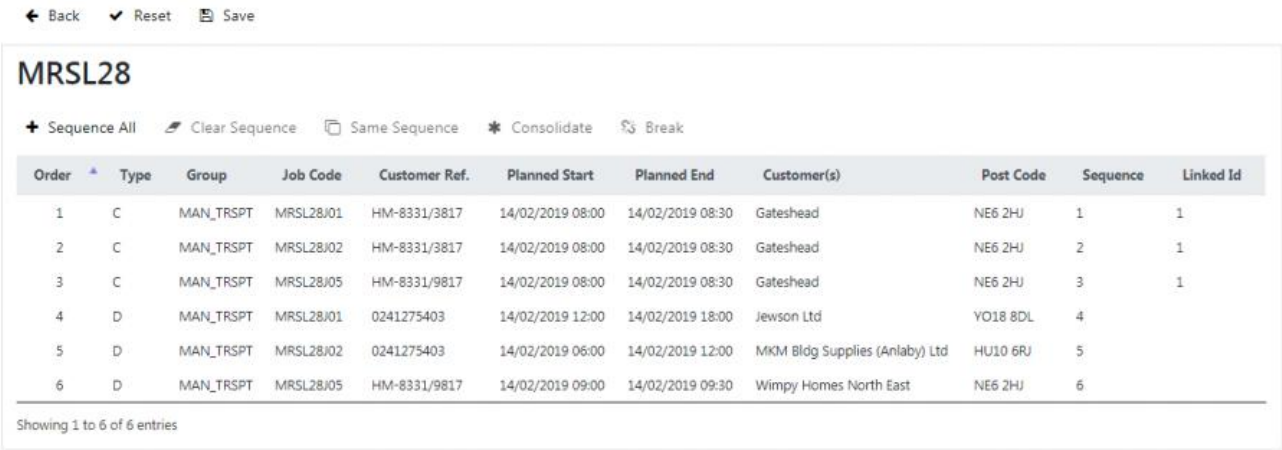
Displayed	Notes
2 Consignments	Consisting of jobs Job1 and Job3.
2 Consignments	Consisting of jobs Job2 and Job4.
Job5	not consolidated.

Note: This over-rides the sequence of jobs in the jobs list - the mobile device application will display all jobs with the same *Linked ID* as a single row on the job list, at the point where the first job would have been shown. You can get more details on how the application lists jobs on the device in the Job List Sequence section.

You should also note that, when the driver has completed jobs, and if they have consolidated or de-consolidated jobs during the course of completing the jobs, *CALIDUS* ePOD will send back that information to the external system (in *Link ID*), so that the external system is aware that these locations may need consolidating or breaking in the future. This allows the external system to learn the best consolidations.

1.4 Consolidating Jobs in Admin

You can consolidate jobs together on a load using the Job Sequencing screen in the *CALIDUS* ePOD Admin system.



Order	Type	Group	Job Code	Customer Ref.	Planned Start	Planned End	Customer(s)	Post Code	Sequence	Linked Id
1	C	MAN_TRSPT	MRSL28J01	HM-8331/3817	14/02/2019 08:00	14/02/2019 08:30	Gateshead	NE6 2HJ	1	1
2	C	MAN_TRSPT	MRSL28J02	HM-8331/3817	14/02/2019 08:00	14/02/2019 08:30	Gateshead	NE6 2HJ	2	1
3	C	MAN_TRSPT	MRSL28J05	HM-8331/9817	14/02/2019 08:00	14/02/2019 08:30	Gateshead	NE6 2HJ	3	1
4	D	MAN_TRSPT	MRSL28J01	0241275403	14/02/2019 12:00	14/02/2019 18:00	Jewson Ltd	YO18 8DL	4	
5	D	MAN_TRSPT	MRSL28J02	0241275403	14/02/2019 06:00	14/02/2019 12:00	MKM Bldg Supplies (Anlaby) Ltd	HU10 6RJ	5	
6	D	MAN_TRSPT	MRSL28J05	HM-8331/9817	14/02/2019 09:00	14/02/2019 09:30	Wimpy Homes North East	NE6 2HJ	6	

Job Sequencing screen

You can access this screen from the Loads screen, by clicking the *Job Sequencing* action button on the row for the load on which you want to consolidate jobs.

You can select a job by clicking on it - clicking on it again will deselect it. When you select a job, the will be highlighted blue.

When you select two or more jobs, clicking the **Consolidate** button will set the *Linked ID* of all the jobs to the same value.
Note: If some of the selected jobs are already linked with this ID, all the jobs with this linked ID will be updated as well.

When you select one or more jobs with a link ID, clicking the **Break** button will clear the linked ID of all the selected jobs. Any jobs remaining with the same linked id that are only present once on the load will also be cleared.

You can find more details in the Admin User Guide, in the Job Sequencing section.

1.5 Executing Consolidated Jobs on the Mobile Device

When you have consolidated jobs, the process is combined, and the driver has a few more options available to them.

The driver will start the mobile device application and log in to the application by:

- entering their user name.
- selecting the vehicle.
- clicking the **Log In** button.

The driver will then be allocated a load and the application will display it in the job list.

When you have a single job, the device job list typically displays the job identifier. When you have consolidated jobs, they appear as "X Consignments" instead.

The driver has several menu options available to them on the job list for consolidation and de-consolidation - these are covered in detail in the following sections.

The driver can select consolidated jobs from the Job List in the same way as an ordinary collection or delivery job.

If the driver chooses to cancel consolidated jobs (i.e. non-delivery, non-collection), they can choose to cancel only one of the consolidation, or to cancel all of the jobs.

When the driver views the consolidated jobs by pressing the row on the job list, the job details screen displays the number of jobs in the consolidation and **<** and **>** buttons so that they can scroll between the jobs and see the details.

The job details *information* tab shows any instructions from all of the jobs in the consolidation.

The driver only has to press **Start Job** and **Arrive Job** once to start or arrive to all of the jobs in the consolidation - all jobs are stamped with the same time.

The application will prompt the driver to enter an arrival signature once, if you have configured arrival signatures - the signature is referenced against all jobs.

The application will prompt the driver to enter pre-job UDF once only, if you have configured pre-job UDF.

The info tab on the collection/delivery screen has similar options to the job details screen, in that the screen will display the first job in the consolidation, the count of jobs, and **<** and **>** buttons so that they can scroll between the jobs and see the details.

Warning: Each job has its own job UDF, which the application displays as you move between each job using the buttons above, if you have configured UDF for their job group. Each job in the consolidation must have its UDF completed before the jobs can be completed.

The driver has options against items to break items out, which will break the whole job out of the consolidation - this process is covered in more detail in the following sections.

The driver is required to enter one customer signature (if you have enabled customer signatures for this job type).

The driver is required to enter one driver signature (if you have enabled customer signatures for this job type).

The application prompts the driver to enter job photos once. The photos taken are stamped against all jobs.

-

Job Details

1.6 Consolidating Jobs on the Mobile Device

There are multiple methods to consolidate jobs.

Method 1:

- The driver can long-press on one of the jobs to be consolidated.
- The driver can then select the *Group Jobs Together* option.
- The device will display a slightly different job list, allowing jobs to be consolidated together.
- The driver then clicks on the jobs to select and highlight those that are to be grouped together. If they click the job again the application will de-select it. If the driver selects a job that is already consolidated, all of those jobs will be selected and highlighted.

- Alternatively, the driver can scan an item from the job - when the application identifies the job, it will select that job for consolidation. Note that you can configure whether this functionality is available.
- When the driver has selected the required jobs, they press the **Consolidate** button.

Method 2:

- The driver can press the **Menu** button on top-right of the Job List screen.
- The driver can then select the *Consolidate* option.
- The driver will be asked to select what types of jobs they want to consolidate - collections or deliveries.
- The device will display a slightly different job list, allowing jobs to be consolidated together.
- The driver then clicks on the jobs to select and highlight those that are to be grouped together. If they click the job again the application will de-select it. If the driver selects a job that is already consolidated, all of those jobs will be selected and highlighted.
- Alternatively, the driver can scan an item from the job - when the application identifies the job, it will select that job for consolidation. Note that you can configure whether this functionality is available.
- When the driver has selected the required jobs, they press the **Consolidate** button.

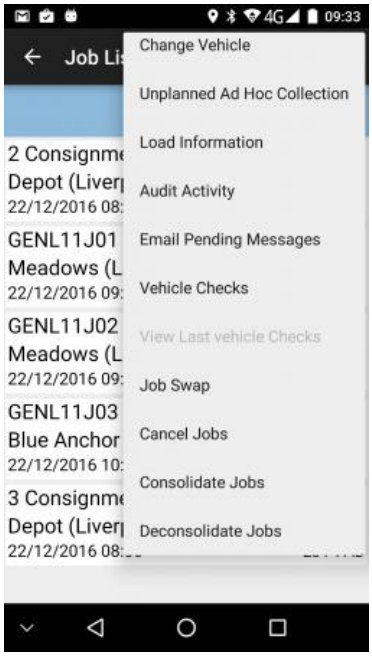
Note: In order for the driver to group jobs together, they must be of the same type i.e. collections or deliveries.

The application does not restrict consolidation in any other way, for example there is no restriction that the jobs must be for the same customer, job group or to the same address.

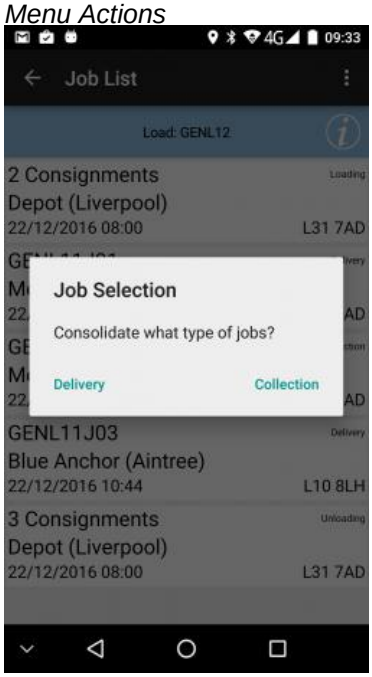
When jobs are consolidated, they show on the job list as a summary number of consignments for example "3 Consignments".

-

Job list

- 

Menu Actions

- 

Select Job Type

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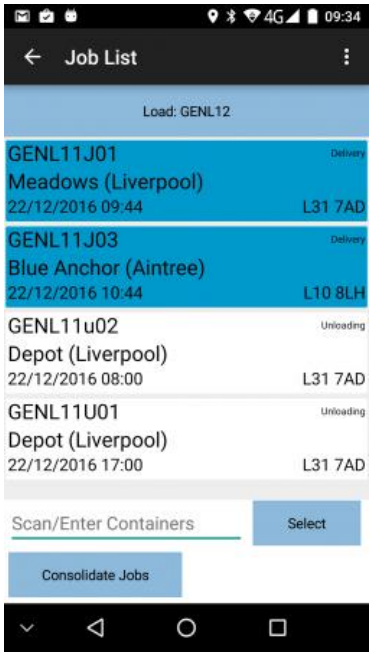
- 

Consolidating Jobs

1.7 De-consolidating Jobs on the Mobile Device

Jobs can be de-consolidated through many methods:

Method 1:

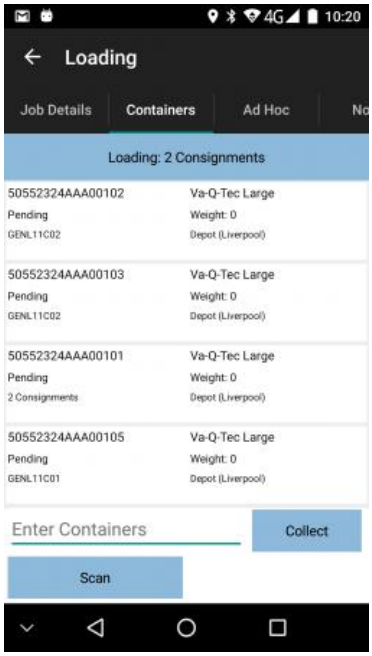
- The driver returns to the Job List.
- The driver long presses on a consolidated job entry to bring up the options.
- The driver can then select *Break Group* to split the consolidation back to the original component jobs. The Job List will be re-displayed, showing each of the previously-consolidated jobs each on a single row.

Method 2:

- The driver can click the **Menu** button on top-right of the Job List screen.
- The driver can then choose the *Deconsolidate* option.
- The device will display a slightly different job list, allowing jobs to be consolidated together.
- The driver then clicks on the jobs to select and highlight those that are to broken out of consolidation. If they click the job again the application will de-select it.
- Alternatively, the driver can scan an item from the job - when the application identifies the job, it will select that job to be broken out of the consolidation. Note that you can configure whether this functionality is available.
- When the driver has selected the required jobs, they press the **Deconsolidate** button.

Method 3:

- Whilst the driver is collecting or delivering the consolidated jobs, they can choose an item to be broken out of the consolidation in the items/containers list, by long-pressing on the item and selecting the *Deconsolidate Job* option there.

- 

Containers Tab, showing single and consolidated containers

2 Appendix A: Document References

A.1 References

Ref No	Document Title & ID	Version	Date
1	UG 291094 EPOD Admin User Guide	4.5.00.02	08/04/2019
2	UG 291097 EPOD Client User Guide	4.0.2.21	02/04/2019

A.2 Glossary

Term or Acronym	Meaning
General Definitions	
EPOD	Electronic Proof of Delivery. The OBSL EPOD system is *CALIDUS* ePOD. This also comprises the basis of the Service Completion system *CALIDUS* eServ.
Server	The portion of the *CALIDUS* ePOD/eServ systems that controls all the data and sends information to and receives updates from the mobile device.
Mobile Device; PDA	The device used by the driver to perform the jobs. Typically an Android mobile device or tablet.
Site	The site usually defines the depot, business or the transport group (carrier). It can be set to any value required by the customer. All transactions data (for example, loads and jobs) and standing data (for example, vehicles and uses) belong to a site. An EPOD user, on a device or in the Admin screen, can only see data for one site at a time.
Load	A single journey for the driver with a set of work attached. A load is identified by a unique load ID. This may also be referred to as a worklist or workload.
Job	Also Consignment. A single task for the driver as a specific location. This could be the collection of goods or the delivery of goods. Jobs may also be Services (for example, servicing, installing or de-installing a boiler). A job is identified by a unique job ID but can also have other references held against the job (e.g. job code, SO number, customer reference and external reference).
Job Group	Jobs must be tagged with a Job Group. All jobs tagged with a single job group are processed in the same way. The job group has configuration associated to it to control such items as: POD/POC Report settings; Pre-Job actions (such as signing at a gatehouse); Post-Job actions (such as who signs for the item, are photos required); configurable fields required for entry for the jobs; Terms and Conditions displayed and; driver/user process (such as photos required for cancellation, comments/notes allowed). The job group can be used for any or all Sites, and the configuration against the job group can be different in each site. Job Groups can also be restricted from Admin and Remote users, so that certain users only see jobs for certain groups.
Container	A generic term for any object that contains the items being collected or delivered. Examples of containers are: Pallet; Package; Carton; Item; Cage. A special container "Loose Products" - see Product below. A container is identified by a container ID which is unique to this physical container.
Product	A product is any goods that are being collected or delivered where the product has a 'Product Code' which identifies what the product is but which does not uniquely identify each individual item. A product will also have a quantity associated with it to indicate how many items of this 'Product Code' are being collected or delivered. Products can either be processed within a 'Container' or as 'Loose Products' without a 'Container'.
Owner	The owner of the order that created the job. Typically this is the sales team that took the order and will be responsible for dealing with queries from the customer regarding the status.
Operator; Executor	The Site (depot or carrier) that is executing the load or loads that are involved in the delivery of the items.
Item Related Definitions	
Job Code	A reference associated with a job or job(s). This reference is common to connected jobs, for example this would be the same on both the collection of goods and the associated delivery of the same goods. Typically this would be the transport unique reference.
SO Number	A reference associated with a job which indicates the "Sales Order Number" this job is associated with.
Customer Reference	A reference associated with a job which has been provided by and will be recognised by the customer.
External Reference	

Term or Acronym	Meaning
	A reference associated with a job which does not match any of the existing references, usually because it has been provided by an external system.
Pallet	An alternative for 'Container'. The term pallet is used when the operation only uses portable platforms as the container for goods.
Package	An alternative for 'Container'. The term package is used when the operation only uses boxes or wrapping as containers for goods.
Package Code	A code representing the type of 'Container'.
Package Desc	A description of the type of 'Container'.
Product Code	A code which identifies what a product is.
Item	A generic term for any individual item that can be collected or delivered. An item can represent a 'Container' or a 'Product'. This can also be used as an alternative for 'Container' when the operation only treats the goods as individual items, i.e. not as identifiable products.
Service Item	An item which will be serviced by a service job. See action 'Service'.
Issue Life	The time after which an item is no longer fit for purpose.
Pack Size; Case Quantity	A product may consist of a full quantity of items, inside a pack. The Pack Size (or Case Quantity) defines the amount of this product contained in a single pack. For example, if there are 85 items to deliver, with a pack size of 24, the number of full packs is determined to be 3 (24 * 3, or 72), with the remaining (13) being 'loose' quantity. This is displayed as "3/13" on the mobile application.
UOM; Item Type	Unit of Measure; The major (case) UOM. This can optionally be displayed on the mobile device when changing product quantities.
Product Type	A classification of the product being delivered. For example, a company may deliver 7 different mortar products and 80 different concrete slab products. The Product Types may be set to "MORTAR" and "SLABS". This may be used to attach additional configuration, changing the data required when collecting or delivering these product types.
Status Definitions	
Status	An indicator of how far through the processing a 'Job', 'Container' or 'Product' has progressed.
Pending	A status indicating that the processing has not yet started, but is required to be completed.
In Progress	A status indicating that processing has started but not yet finished.
Complete	A status indicating that the 'Job', 'Container' or 'Product' has been collected or delivered.
Complete (Amended)	A status indicating that the 'Job', 'Container' or 'Product' has been collected or delivered but that some changes or amendments have been made. This means that not everything that was planned to be collected or delivered was collected or delivered, some items may have been cancelled or some products may only have had some of the planned quantities collected or delivered.
Complete (Claused)	A status indicating that the processing has been finished but that a 'Clause' condition has been recorded for this item.
Claused	See 'Complete (Claused)' and action 'Clause'.
Cancelled	A status indicating that the processing of this item or job is no longer required.
Cancelled at Collection	A status indicating that the delivery of a container or product is no longer required because the associated collection of this container or product was cancelled.
Submitted	An optional status that applies only to a 'Job' and which occurs after the 'Job' has been completed. This indicates that any time and expenses information recorded for the 'Job' has been submitted back to the server and can no longer be altered.
Action Definitions	
Start	An action associated with a 'Job' meaning the driver is about to start the processing of this job or jobs. This action will mark the job(s) with a status of 'In Progress'.
Arrive	A conditional action associated with a 'Job' meaning the driver has arrived at the location the goods should be collected from or delivered to.
Continue	An action associated with a 'Job' meaning the driver has previously performed the 'Start' and/or 'Arrive' action and has exited the processing screen but is now going to continue the processing.
Collect	An action associated with a specific 'Container' or a 'Product' meaning the driver has collected the 'Container' or 'Product'. This action will mark the 'Container' or 'Product' with a status of 'Complete' or 'Complete (Amended)'.
Collect Claused	An action associated with a specific 'Container' or a 'Product' meaning the driver has collected the 'Container' or 'Product' but with a condition under which the collection was accepted. This action will accept the clause condition and then mark the 'Container' or 'Product' with a status of 'Complete (Claused)'.

Term or Acronym	Meaning
Deliver	An action associated with a specific 'Container' or a 'Product' meaning the driver has delivered the 'Container' or 'Product'. This action will mark the 'Container' or 'Product' with a status of 'Complete' or 'Complete (Amended)'.
Deliver Claused	An action associated with a specific 'Container' or a 'Product' meaning the driver has delivered the 'Container' or 'Product' but with a condition under which the delivery was accepted. This action will accept the clause condition and then mark the 'Container' or 'Product' with a status of 'Complete (Claused)'.
Clause	An action associated with a specific 'Container' or a 'Product' that has already been collected or delivered meaning the collection or delivery has been accepted with a condition. This action will accept the clause condition and then mark the 'Container' or 'Product' with a status of 'Complete (Claused)'.
Cancel	An action associated with a 'Job', 'Container' or 'Product' meaning the collection or delivery will not be performed for this 'Job', 'Container' or 'Product'.
Submit	An optional action which can conditionally be carried out after a 'Job' has been collection or delivered meaning that any/all required expense or time recording for this 'Job' has been completed and can be submitted back to the server.
Service	A service of a service item or items. Typically, Installation, Deinstallation or Service. The process of a service usually encompasses Pre- and Port-work checks, information gathering and diagnosis and resolution notes. Additional references (MC Refs) may also be captured.
Actioned	A general term describing completing a job. So, 'Actioned' may be used instead of 'Collected', 'Serviced', 'Delivered'.
Consolidate	The action of taking several jobs and linking them together, so they are actioned at the same time with one start, arrive and signature.
Deconsolidate	The action of taking a consolidation of jobs and breaking them down into the component jobs again.
Job Swap	The action of selecting an existing load not assigned to the user, and picking jobs to transfer onto the user's load.
Signature Capture	Usually the final action of a job, where the customer's name and signature are entered.
Other Definitions	
Reason Code	A code which represents the reason that a job was cancelled or an item was cancelled or claused.
Vehicle	The vehicle used for transporting the goods.
Vehicle Checks	Also Defect Checks. A series of questions representing the results of checks intended to ensure the vehicle is in an acceptable condition.
Metrics Entry	A series of questions to capture information either at the start or end of a 'Load'.
Driver	The person performing the collections or deliveries; the user of the device/application.
Engineer	The person performing the services; the user of the device/application.
Customer	The person/company the goods are being collected from or delivered to.
Signatory	The name of the person providing a signature.
T&Cs	Terms and Conditions. The T&Cs are shown when signatures are prompted for. The text of the T&Cs are defined in the system itself.
Transfer Load	A load select from which to swap jobs to the user's load.
Base	E.g. 'Return to Base'. Typically the depot from which the driver departed.
Unplanned Ad Hoc Collection	A collection job that is created by the driver, usually after delivering to a customer.
Ad Hoc Container Entry/Scanning	The process of adding containers (items) to a job that have not been pre-advised on the job.
Completion Report	POD, POC, Service/Work Report.
Load Assignment	The action of assigning a vehicle and/or a driver to a load.
Job Assignment	The action of putting jobs onto a load.
Collection/Delivery Windows; Access Windows	Periods of time between which it is acceptable to deliver or collect from that customer. This has limited use in the system, mostly for reporting purposes.
Location/Map Terms	
Lat-Longs; GPS Co-ordinates, GPS Position	Latitude and Longitude co-ordinates, specified together as a single entity, identifying the exact position of a location. There are multiple formats - *CALIDUS* ePOD uses decimal notation, for example "53.3490818,-2.8521498" identifies the OBS Logistics office building in Liverpool.
GPS	

Term or Acronym	Meaning
	Global Positioning System; the satellite system used to obtain a GPS position, for use with navigation and location positioning.
Geocode; Reverse Geocode	Geocoding is the process of obtaining lat-longs from an address. Reverse Geocoding is the process obtaining an address from lat-longs.
Geofence; Geofence Break	A Geofence is a perimeter around a location. A Geofence Break occurs when a device passes through this perimeter on entry or exit from the location.

A.3 Authorised By

Murray Middleton	OBS Project Manager	_____
Tony Walker	OBS Consultant	_____

3 Functional Overview

3.1 Solution

The inbound CSV Import process is designed to allow Customers to import Orders and Loads.

There are two methods of uploading the CSV file:

1. Manual Upload: Upload the file through the Upload screen in the C-ePOD Application and browse to file in a local folder.
2. Automatic Upload: Copy the file into a specified folder from which configuration setup allows automatic upload.

This document covers many Job and Load CSV upload scenarios, including examples.

4 Functional Description

4.1 Inbound CSV Upload

The inbound CSV Upload file format is specified below and can be created with the following fields:

Col No.	Sheet Col.	Field	Type	Max Length	Example	Required
1	A	Load Delivery Date	Date	8 digits (DDMMYYYY)	10072014	N
2	B	Load Delivery Time	Time	4 digits (HHMM)	1001	N
3	C	End Delivery Date	Date	8 digits (DDMMYYYY)	10072014	N
4	D	End Delivery Time	Time	4 digits (HHMM)	1759	N
5	E	User Id	Character	10	JSmith	N
6	F	Job Code	Character	20	JOBCODE1	Y
7	G	Cust Ref	Character	30	CR1	Y
8	H	Job Type	Character	2	D	Y
9	I	Job Instruction	Character	255	Leave Next Door	N
10	J	Job Delivery Date	Date	8 digits (DDMMYYYY)	10072014	Y
11	K	Job Delivery Time	Time	4 digits (HHMM)	1001	Y
12	L	Job End Delivery Date	Date	8 digits (DDMMYYYY)	10072014	Y
13	M	Job End Delivery Time	Time	4 digits (HHMM)	1031	Y
14	N	Customer Name	Character	50	J Bloggs	Y
15	O	Address 1	Character	40	1 High Street	Y
16	P	Address 2	Character	40	Trumpton	N
17	Q	Address 3	Character	40	Lincoln	N
18	R	Address 4	Character	40	Lincolnshire	N
19	S	Address 5	Character	40		N
20	T	Postcode	Character	8	L23 4hg	Y
21	U	Contact	Character	40	J Bloggs	N
22	V	Telephone	Character	50	01234 34567	N
23	W	Email	Character	255	JBloggs@blogmail.com	N
24	X	Container Id	Character	30	C1	Y
25	Y	Product Id	Character	40	P1	N
26	Z	Product Description	Character	40	Prod 1	N
27	AA	Long Prod Description	Character	255	Long Prod 1	N
28	AB	Planned Qty	Character	Max value: 2147483647	1	N
29	AC	Site	Character	10	Site1	Y
30	AD	Job Group	Character	10	Group1	Y
31	AE	Load Id	Character	20	LOAD1	N
32	AF	Cust Code	Character	20	CUST CODE1	N
33	AG	Vehicle Id	Character	10	VEH1	N

Files can be created using Excel or another spreadsheet and saved as CSV format.

For example a simple 1 line upload could be created as follows:

```
,,,,,JOBCODE1,CR1,D,,10072014,901,10072014,901,J Bloggs,,,,,,,,,,C1,,,,,TEST,TEST,,
```

Example 1: *Single Job, Single Container.*

These examples can be pasted into Notepad and then 'saved as' a .csv file by specifying a .csv extension (e.g. example1.csv).

Uploading this would create a Job with 'JOBCODE1' for customer 'J Bloggs' with a single container record. Note: this assumes that the customer 'J Bloggs' already exists on the C-ePOD database.

An example of an upload for a customer that does not exist would be as follows:

```
,,,,,JOBCODE2,CR2,D,,10072014,901,10072014,901,J Smith,1 High
Street,Wimbledon,,,London,W12 8TZ,Mr J Smith,01234,jsmith@gmail.com,C1,,,,,TEST,TEST,,
```

Example 2: *Single Container, Customer Information.*

This could be saved as example2.csv.

4.2 Upload via Import screen

The import screen lists the following options:

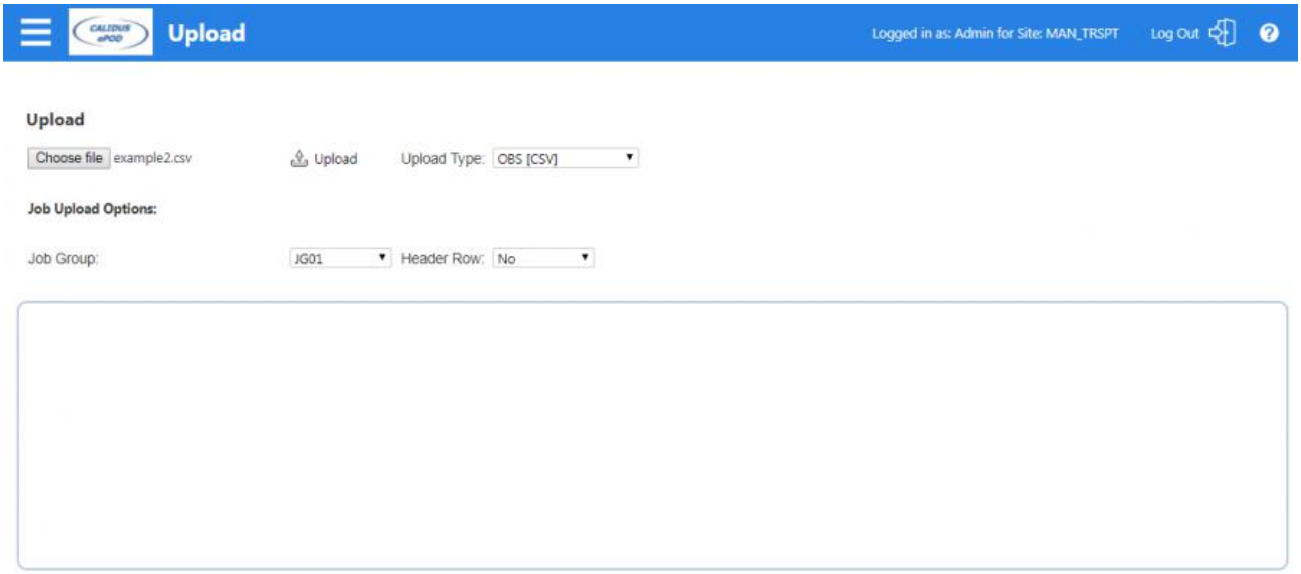


Figure 1: *Data Upload - Import screen.*

- Job Group: Sets the Job Group the jobs are to be created for. Job Group is a method of separating Jobs for the same site.
- Upload Type: Should be set to 'OBS [CSV]'.
- Header Row: Should be set to 'Yes' if the first row of the CSV file contains a header row. The above examples do not so for these this value should be set to 'No'.

Once these values are set, click the 'Choose File' button and browse to the relevant folder for the file (e.g. example2.csv). Once it has been found, click 'Upload' to upload the data onto C-ePOD.

4.2.1 Validating Upload

The upload screen will list the result of the CSV upload, showing the upload information in the additional 'Validation' and 'Reason for Failure' columns:

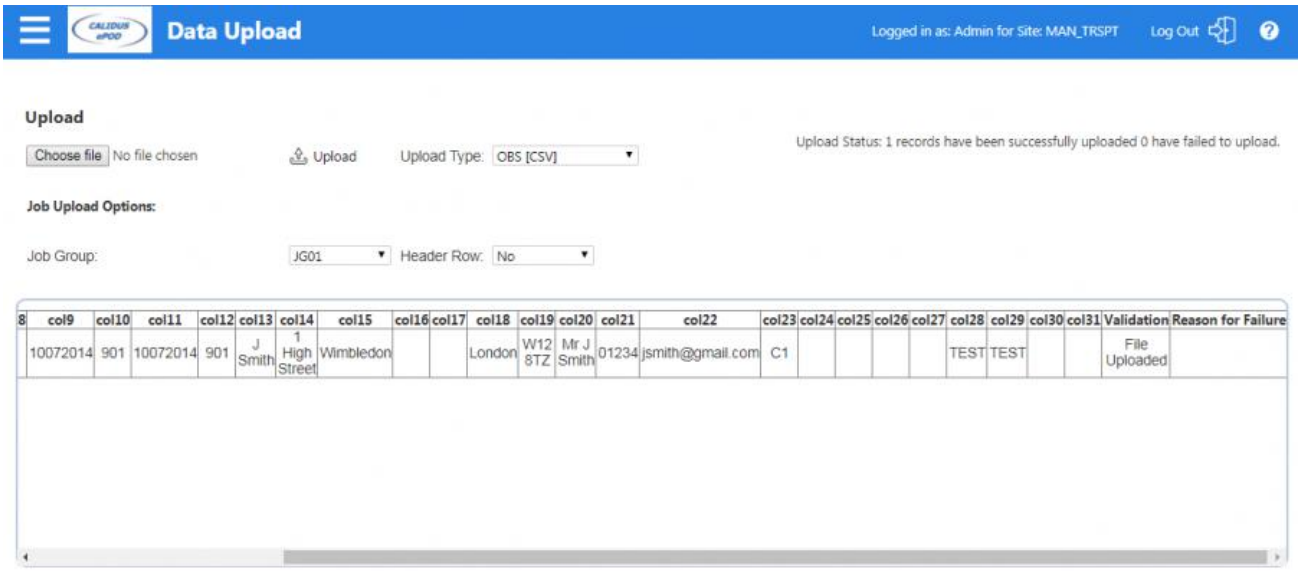


Figure 2: *Data Upload - Validation.*

In this case, there was only one record to upload and the Validation field indicates the record was successfully uploaded.

The details of the Job created can be checked by entering the job details screen and searching for the Job Code.

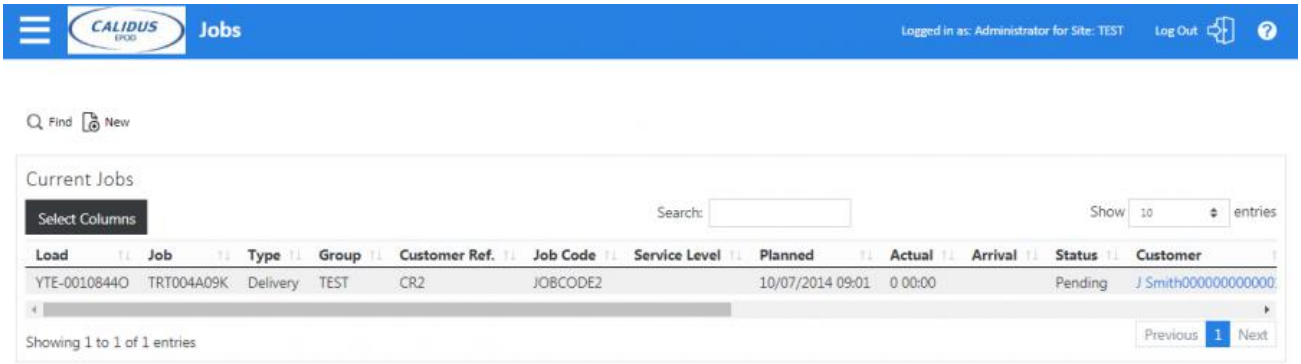


Figure 3: *Job Details - Uploaded job, load number defaulted.*

Note: A 'Load Id' was not specified in the upload file. In this case, the system has generated a load number 'YTE-0010844O'.

4.3 Automatic Upload

It is possible to setup an inbound polling process that will automatically upload files from a certain folder. In the "Export Config" screen within C-ePOD, a record should be defined as follows:

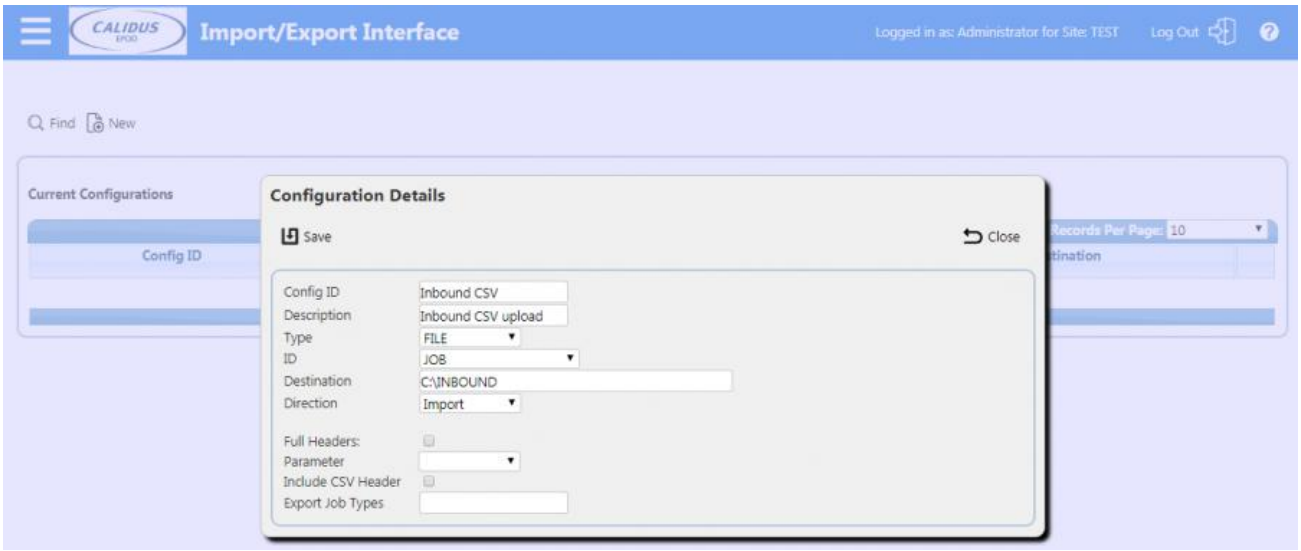


Figure 4: *Export Configuration - Configuration Details.*

- Config ID: Inbound CSV
- Description: Inbound CSV Upload
- Type: FILE
- ID: JOB
- Destination: Upload Folder (C:\Inbound in this example)
- Direction: I (Inbound)

This indicates that files copied to the 'C:\Inbound' folder on the server which C-ePOD is running will be uploaded automatically into C-ePOD. **Note:** Some additional configuration is required to schedule an inbound polling job which picks up this configuration.

4.3.1 Validating Upload

For example, if we copy the example1.csv file mentioned above into the C:\Inbound folder.

Enter the 'Export Audit' screen and search for records created on the current date:

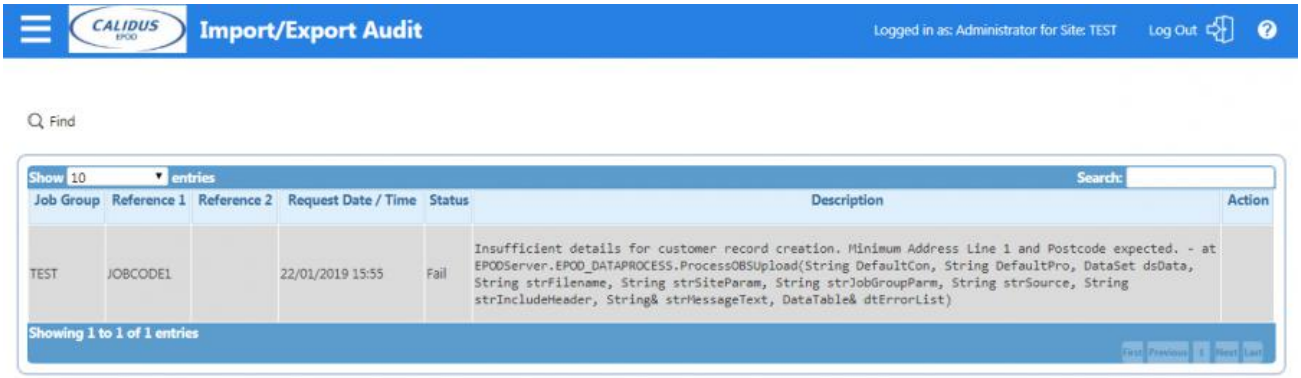


Figure 5: *Export Audit - Verify upload.*

In this example, the description field indicates that the record could not be uploaded. This is due to the fact that for the data listed above for example1 does not contain customer address details.

In order to fix this error, the Customer should be manually created within the C-ePOD system. Enter the Customer Maintenance screen and create a new record for 'J Bloggs':

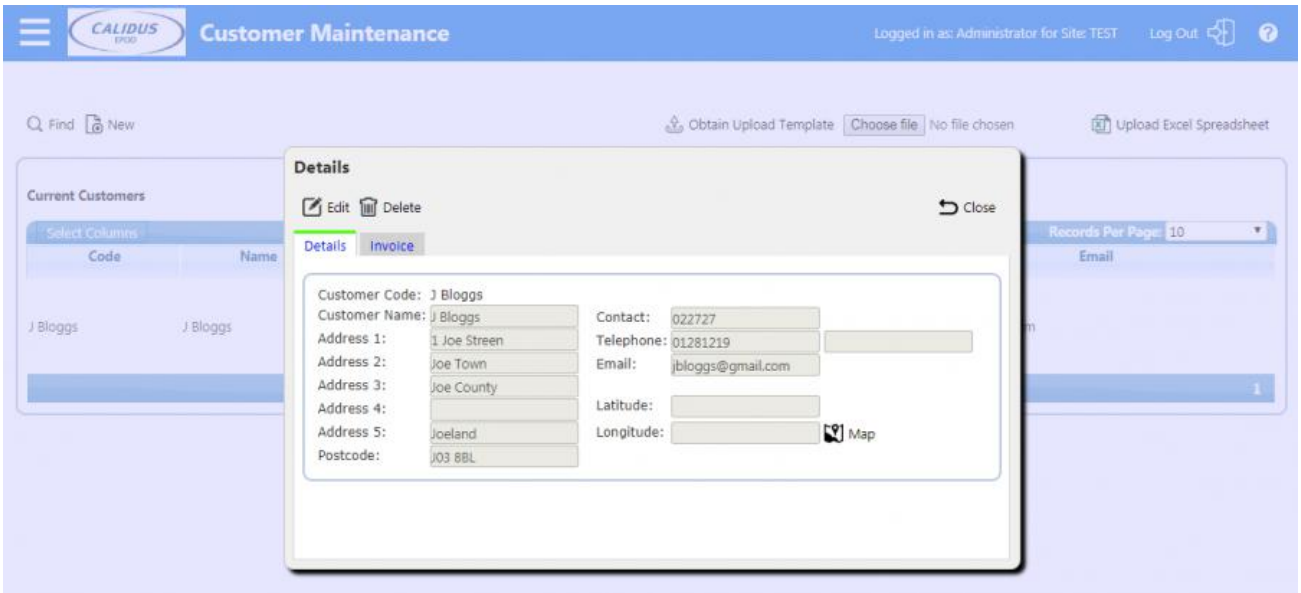


Figure 6: *Customer Maintenance - New Customer.*

The previous example1.csv file can now be re-uploaded. In order to do this, the file should be moved from the error folder (e.g. C:\Inbound\errors\) back into the upload folder. Once the file has re-processed, check the 'Export Audit' screen again:

Figure 7: *Export Audit - Verify upload.*

The Description field of 'Uploaded' on the last line indicates that the job was successfully created.

4.4 Import File Examples

4.4.1 Including a Header Record

An extra line can be included at the front of the file to include Header Text for each column. This makes it much easier to create records within Excel or another spreadsheet tool. For this example (example3.csv) we will create a new upload file with a header row and two new job codes:

```
EPL_LOAD_START_PLANNED_DATE, EPL_LOAD_START_PLANNED_TIME, EPL_LOAD_END_PLANNED_DATE,
EPL_LOAD_END_PLANNED_TIME, EPL_USER_ID, EPL_JOB_CODE, EPL_CUST_REF, EPL_JOB_TYPE,
EPL_JOB_INSTRUCTION, EPL_START_PLANNED_DATE, EPL_START_PLANNED_TIME,
EPL_END_PLANNED_DATE, EPL_END_PLANNED_TIME, EPL_CUSTOMER_NAME, EPL_ADDRESS_1,
EPL_ADDRESS_2, EPL_ADDRESS_3, EPL_ADDRESS_4, EPL_ADDRESS_5, EPL_POSTCODE, EPL_CONTACT,
EPL_TELEPHONE, EPL_EMAIL, EPL_CONTAINER_ID, EPL_PRODUCT, EPL_DESCRIPTION,
EPL_DESCRIPTION_LONG, EPL_PLANNED_QTY, EPL_SITE_ID, EPL_JOB_GROUP, EPL_LOAD_ID,
EPL_CUST_CODE

,,,,,JOBCODE3,CR3,D,,10072014,901,10072014,901,J Smith,1 High
Street,Wimbledon,,,London,W12 8TZ,Mr J Smith,01234,jsmith@gmail.com,C3,,,,,TEST,TEST,,
```

```
,,,,,JOBCODE4,CR4,D,,10072014,901,10072014,901,J Smith,1 High
Street,Wimbledon,,,London,W12 8TZ,Mr J Smith,01234,jsmith@gmail.com,C4,,,,,TEST,TEST,,
```

Example 3: *Two Jobs for Single Containers with Customer Information and Header Row.*

Browse to this file from the upload screen, this time setting the 'Header Row' as 'Yes':

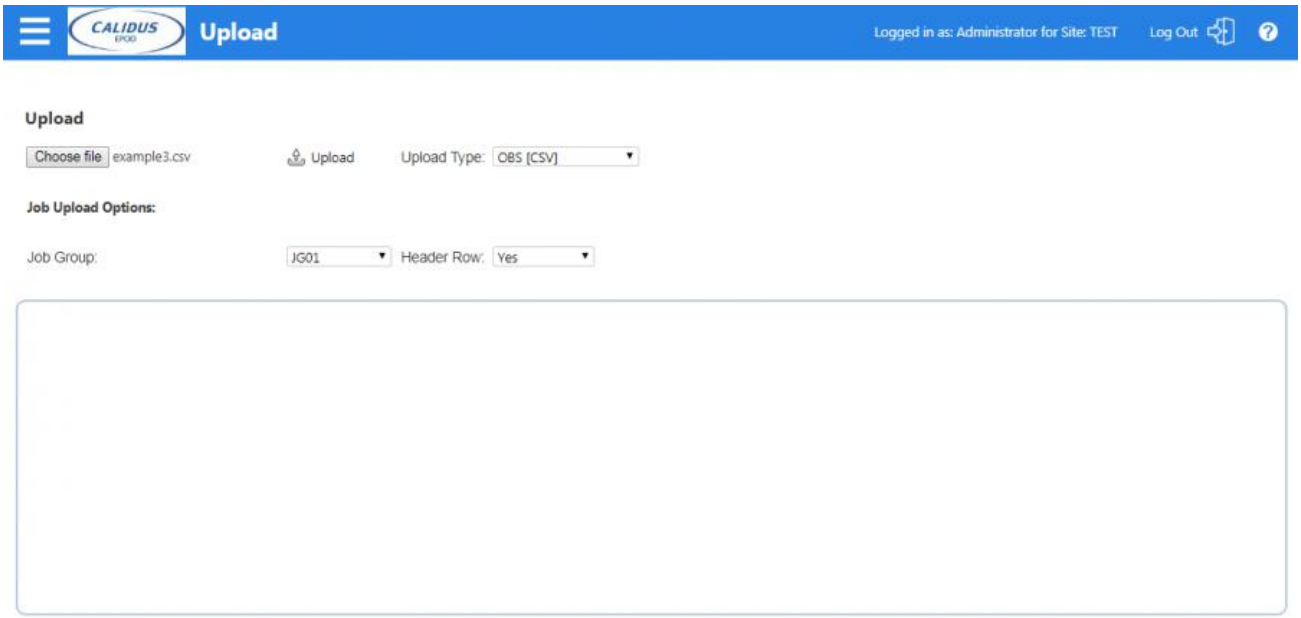


Figure 8: *Data Upload - Import screen.*

Uploading this file using the manual upload screen gives the following result:

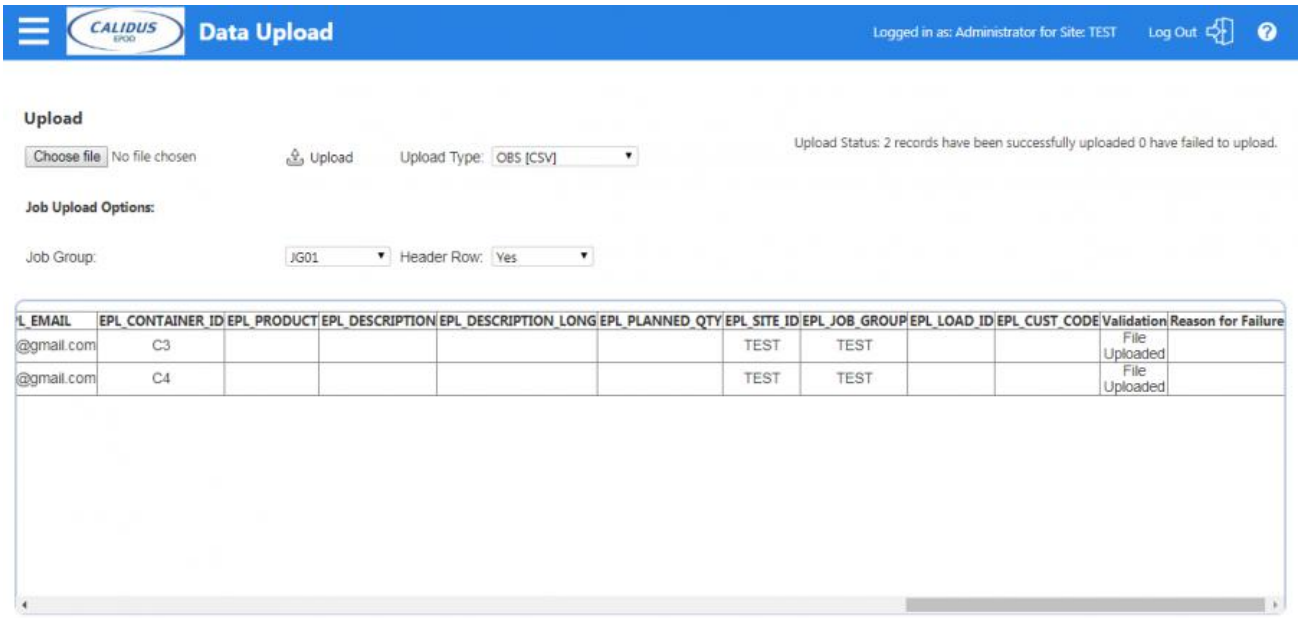


Figure 9: *Data Upload - Validation.*

This shows both records were successfully created.

4.4.2 Creating New Products

For the jobs created so far, product details have not been included. If we examine the Job with Job Code 'JOBCODE1', we can see that a job was created with a container with Id 'C1' but the container does not have any corresponding products:

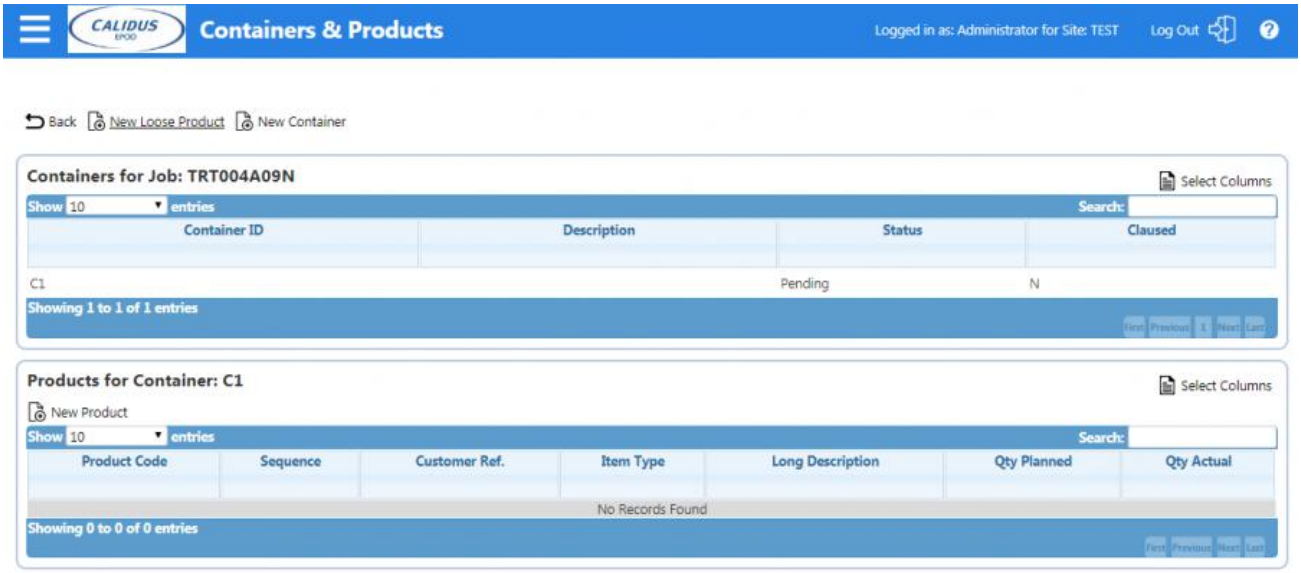


Figure 10: *Data Upload - Import screen.*

If more details are required to be stored against each job, then it is possible to create product records for each container. This example will create a job with one container and 2 product codes:

```
,,,,,JOBCODE5,CR5,D,,10072014,901,10072014,901,J Smith,1 High
Street,Wimbledon,,,London,W12 8TZ,Mr J
Smith,01234,jsmith@gmail.com,C5_1,PROD1,PRODDESC1,LONGDESC1,1,TEST,TEST,,

,,,,,JOBCODE5,CR5,D,,10072014,901,10072014,901,J Smith,1 High
Street,Wimbledon,,,London,W12 8TZ,Mr J
Smith,01234,jsmith@gmail.com,C5_1,PROD2,PRODDESC2,LONGDESC2,2,TEST,TEST,,
```

Example 4: *Single Job, Single Container, Multiple Products.*

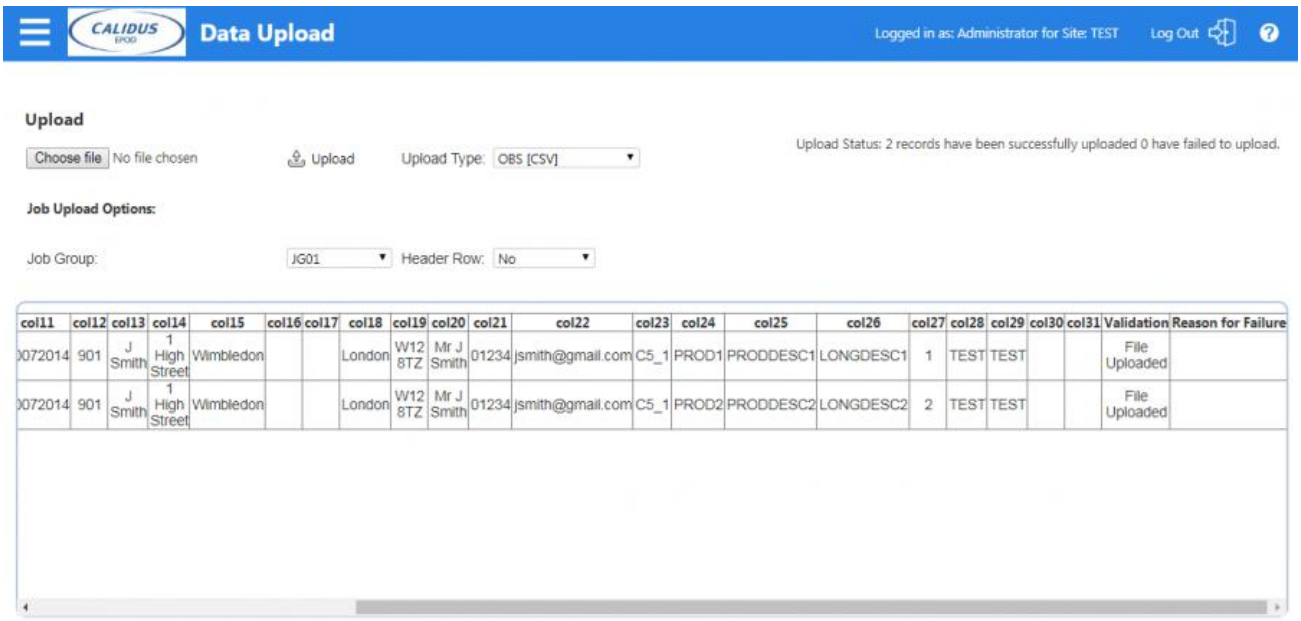


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Figure 11: *Data Upload - Validation.*

Check the Job created in the 'Job Details' screen:

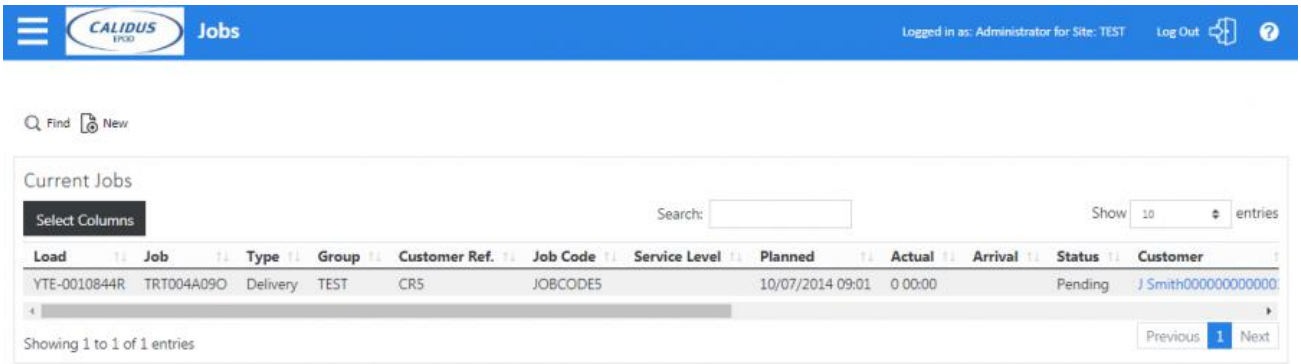

Figure 12: *Job Details - Uploaded Job.*

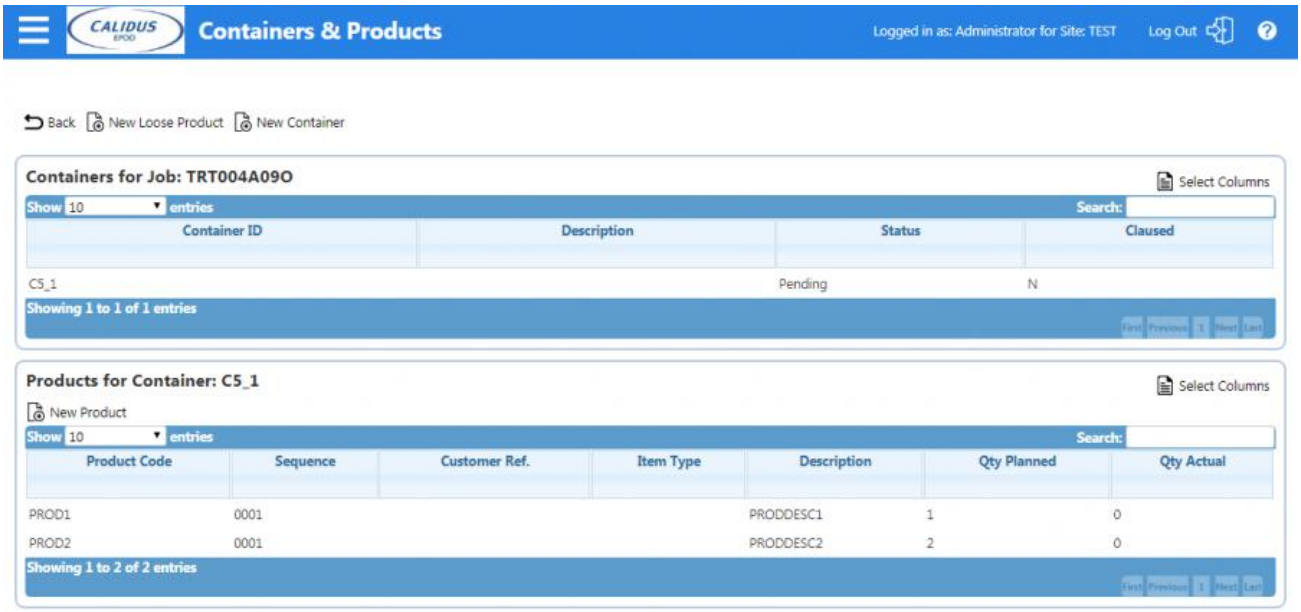

Figure 13: *Job Details - Container and Product Details.*

This shows the two product records that were created.

4.4.3 Assigning to Users

For the examples we have created so far, the User Id has not been specified. This means the Loads created have been set at status 'Pending'. In reality, the load may already have been assigned a driver for delivery. This example shows a Job that has a user 'User1' already assigned to it:

```
,,,,User1,JOBCODE6,CR6,D,,10072014,901,10072014,901,J Smith,1 High
Street,Wimbledon,,,London,W12 8TZ,Mr J Smith,01234,jsmith@gmail.com,C6,,,,,TEST,TEST,,
```

Example 5: *Single Job, Single Container, assigned to user.*

Uploading the file and check the load created:

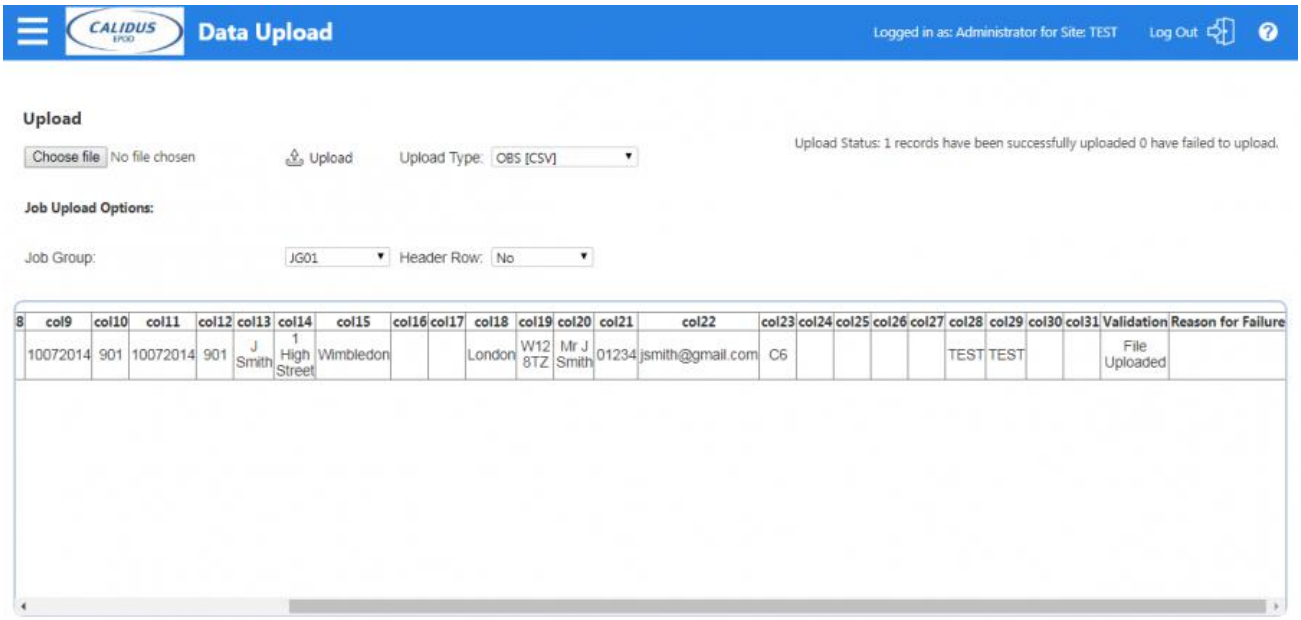

Figure 14: *Data Upload - Validation.*

This time the load has been created with status 'Assigned' with the user set as 'User1':

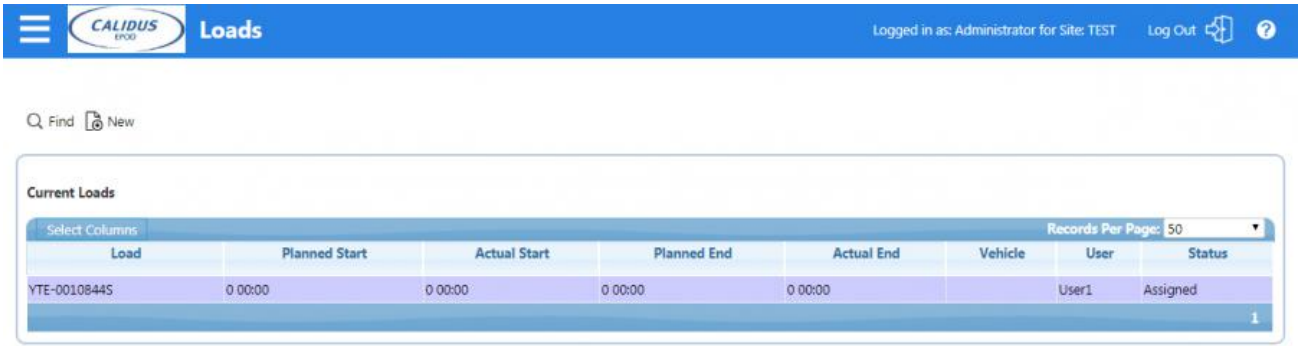

Figure 15: *Loads Screen - User assigned.*

Note: The site parameter 'Import Create Standing Data' has to be checked in order for new users to be created:

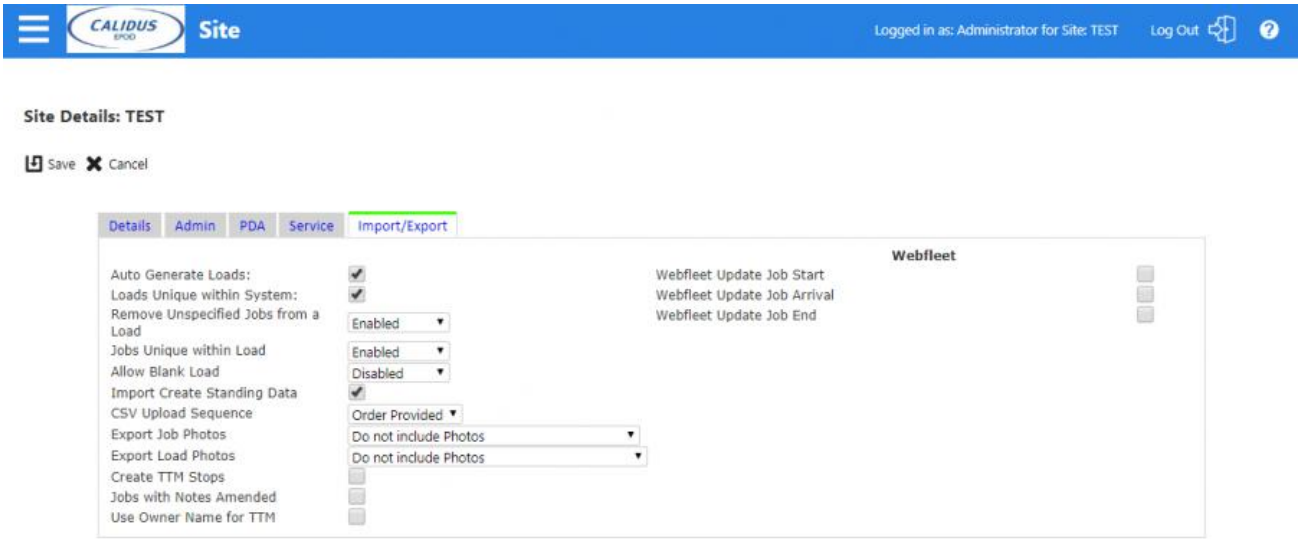

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Figure 16: *Site Maintenance - Import Create Standing Data.*

4.4.4 Multiple Loads

For the example so far, a single load has been created for each upload. If two different usernames are included, then two separate Load Ids will be generated:

```
,,,,User1,JOBCODE7,CR7,D,,10072014,901,10072014,901,J Smith,1 High
Street,Wimbledon,,,London,W12 8TZ,Mr J Smith,01234,jsmith@gmail.com,C7,,,,,TEST,TEST,,

,,,,User2,JOBCODE8,CR8,D,,10072014,901,10072014,901,J Smith,1 High
Street,Wimbledon,,,London,W12 8TZ,Mr J Smith,01234,jsmith@gmail.com,C8,,,,,TEST,TEST,,
```

Example 6: *Two Jobs, Two Users, two separate Loads.*

Uploading this file results in two separate loads being created:

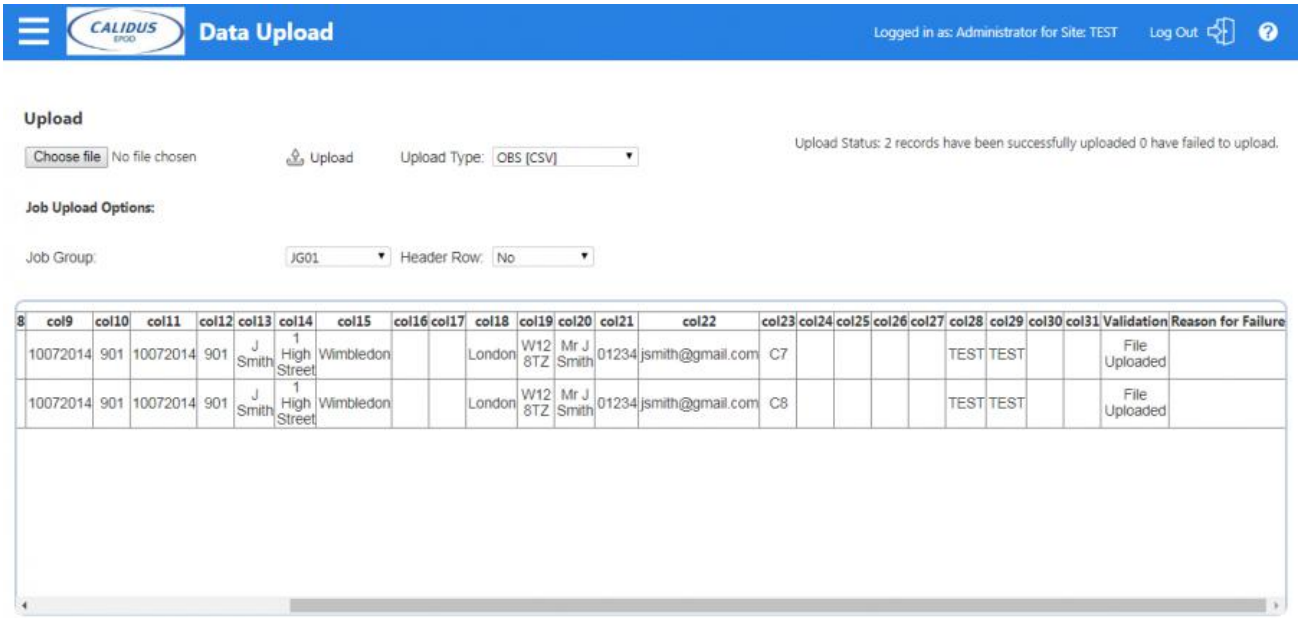

Figure 17: *Data Upload - Validation.*

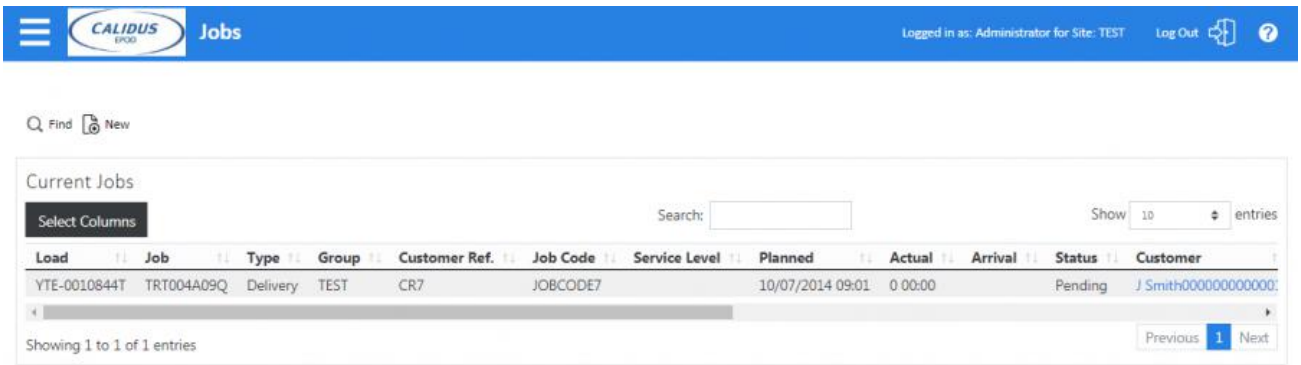

Figure 18: *Job Details - Load One.*

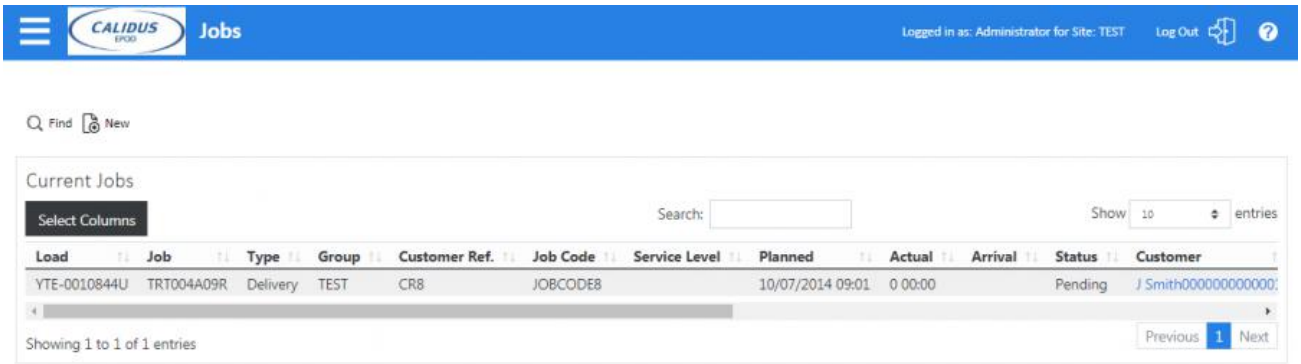

Figure 19: *Job Details - Load Two.*

4.4.5 Modifying and Re-uploading loads

If a job is at status 'Pending' or 'Assigned' then it is possible to modify the details of that job by uploading another file.

For example the Customer Reference field could be modified for 'JOBCODE8' from the original 'CR8' to 'CR8v2' using the data below:

```
,,,,User2,JOBCODE8,CR8v2,D,,10072014,901,10072014,901,J Smith,1 High
Street,Wimbledon,,,London,W12 8TZ,Mr J Smith,01234,jsmith@gmail.com,C8,,,,,TEST,TEST,,
```

Example 7: *Single Job, Updating Customer Reference information.*

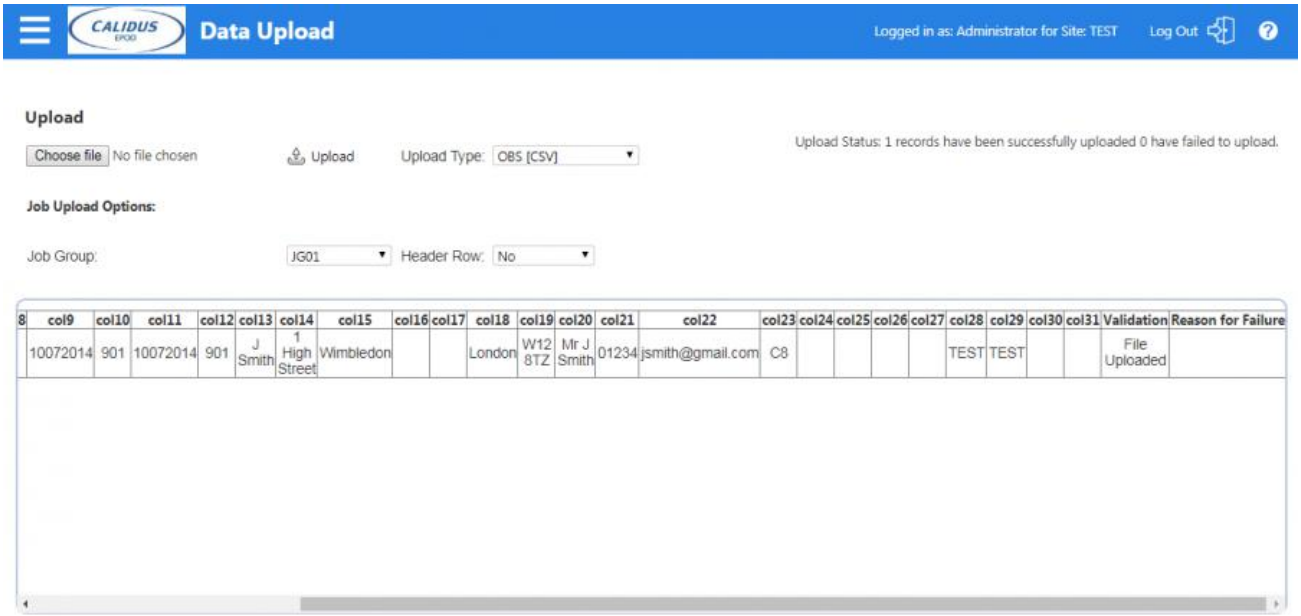

Figure 20: *Data Upload - Validation.*

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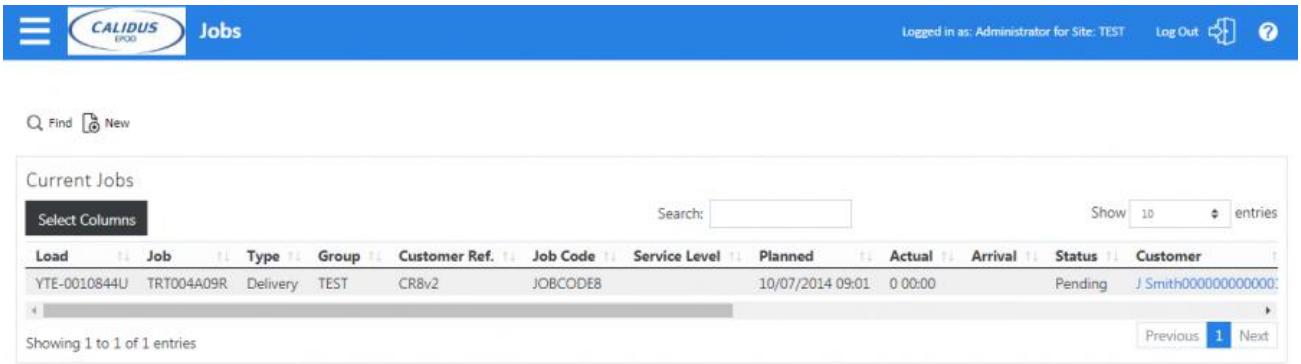


Figure 21: *Job Details - Updated Information.*

4.4.6 Moving Jobs to a new load

It is possible to swap a Job from one Load to another Load by changing the user and load data. In order to do this, we have to specify the load id the jobs will belong to.

Firstly, we create a new load with three jobs by assigning them all to the same load 'LOAD1':

```
,,,,User1,JOBCODE9,CR9,D,,10072014,901,10072014,901,J Smith,1 High
Street,Wimbledon,,,London,W12 8TZ,Mr J
Smith,01234,jsmith@gmail.com,C9,,,,,TEST,TEST,Load1,

,,,,User1,JOBCODE10,CR10,D,,10072014,901,10072014,901,J Smith,1 High
Street,Wimbledon,,,London,W12 8TZ,Mr J
Smith,01234,jsmith@gmail.com,C10,,,,,TEST,TEST,Load1,

,,,,User1,JOBCODE11,CR11,D,,10072014,901,10072014,901,J Smith,1 High
Street,Wimbledon,,,London,W12 8TZ,Mr J
Smith,01234,jsmith@gmail.com,C11,,,,,TEST,TEST,Load1,
```

Example 8: *Three Jobs, Single Load.*

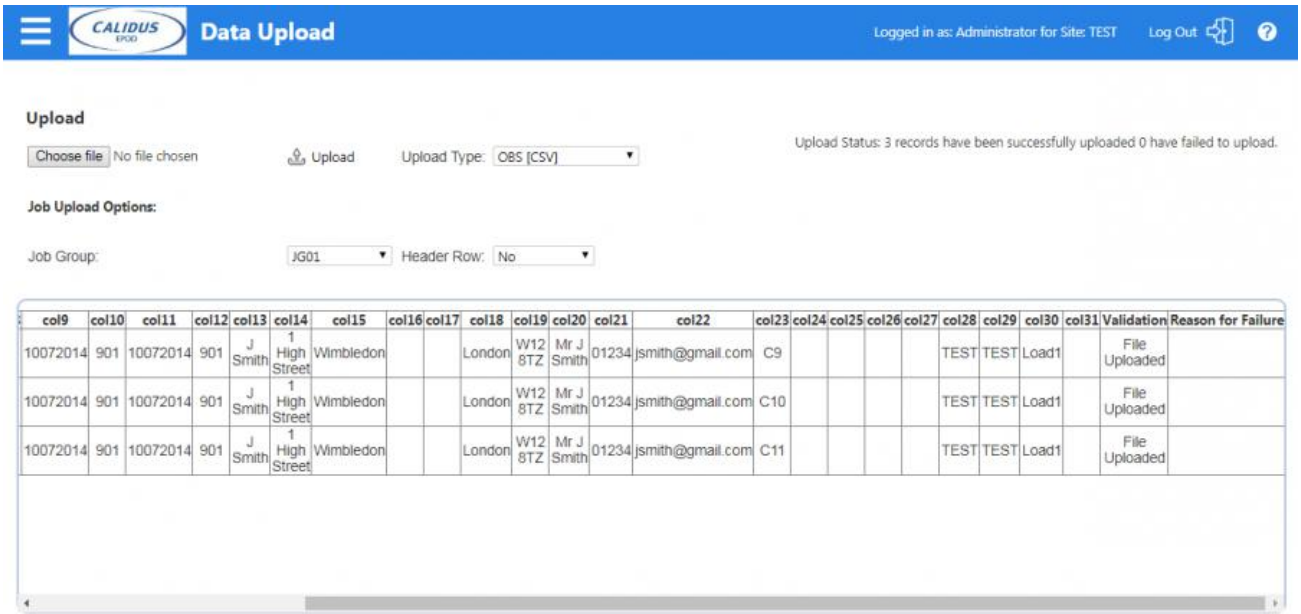


Figure 22: *Data Upload - Validation.*

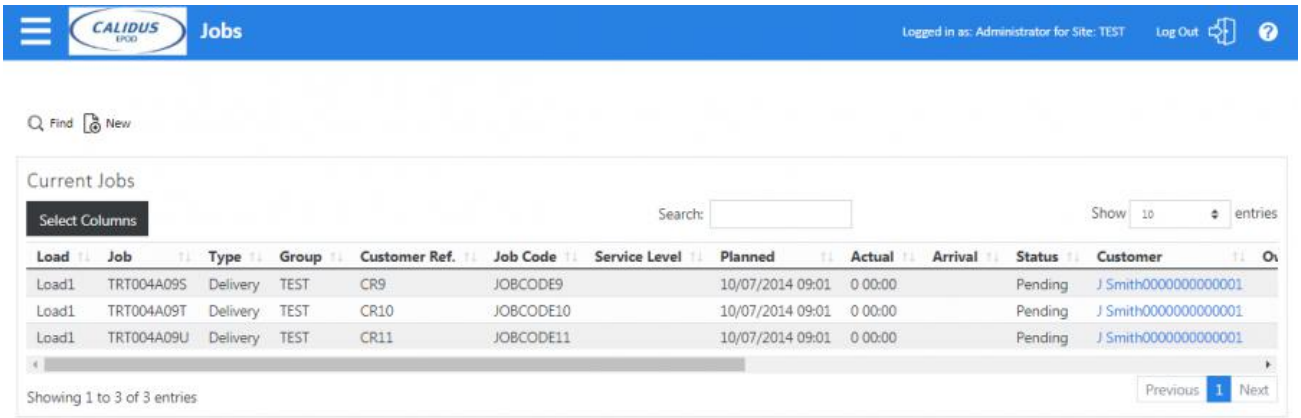


Figure 23: *Job Details - Load One.*

Then if we change the load of one of the records and re-upload it, the record will be moved to a different load:

```
,,,,User2,JOBCODE10,CR10,D,,10072014,901,10072014,901,J Smith,1 High
Street,Wimbledon,,,London,W12 8TZ,Mr J
Smith,01234,jsmith@gmail.com,C10,,,,,TEST,TEST,Load2,
```

Example 9: *Existing Job, New User, New Load.*

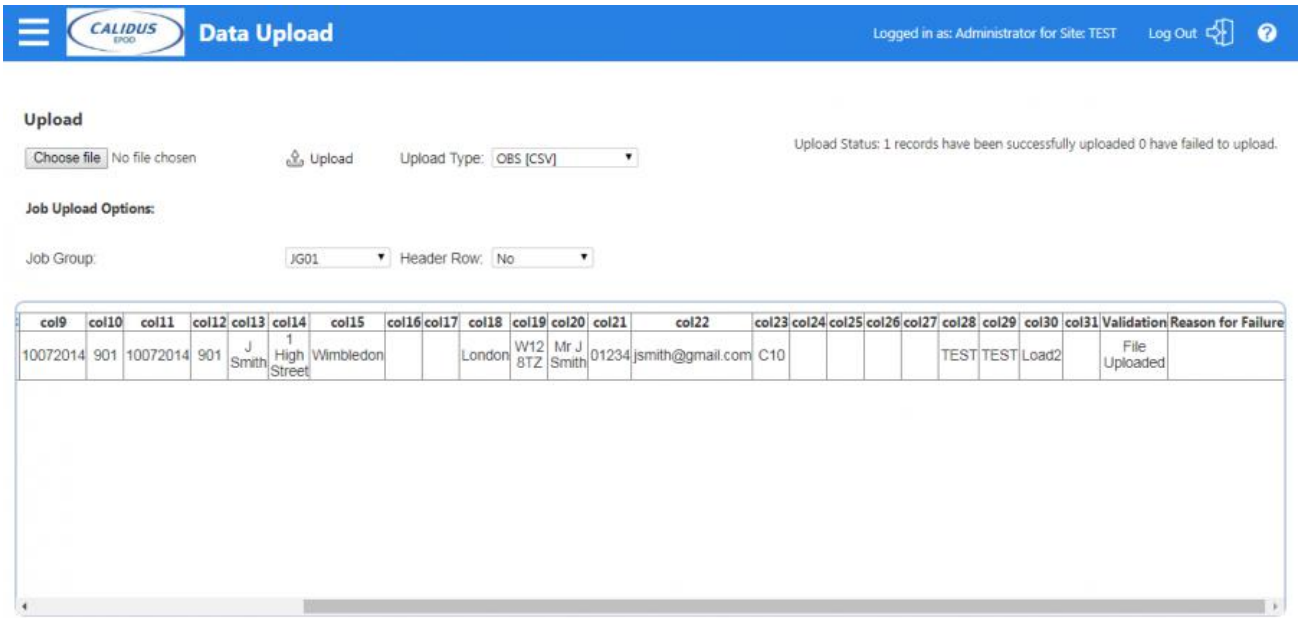


Figure 24: *Data Upload - Validation.*

Job code 'JOBCODE10' is now assigned to 'Load2':

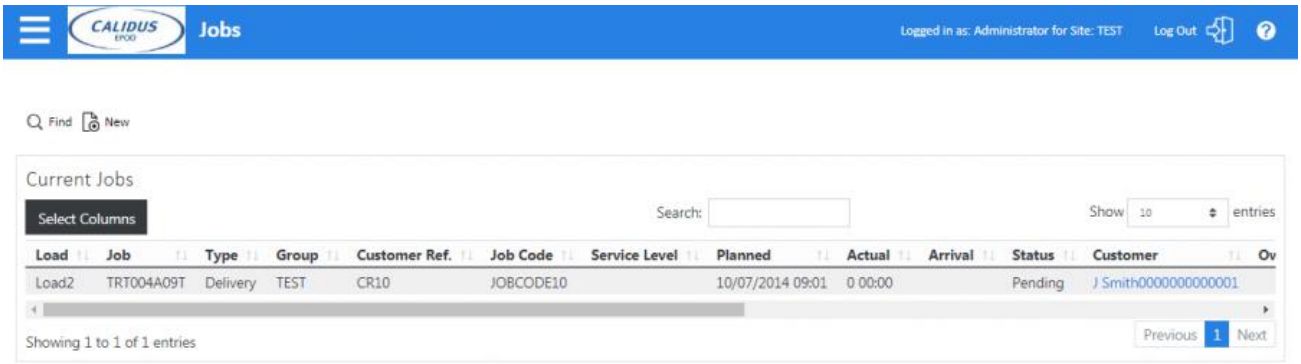


Figure 25: *Job Details - Load2.*

'Load 1' now consists of only two jobs:

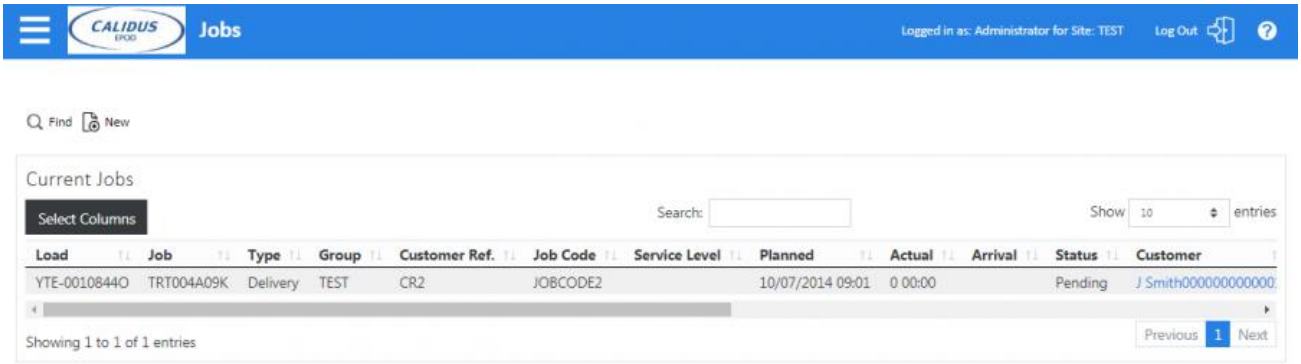


Figure 26: *Job Details - Load1.*

Note that a job that is added to an existing load will be added with the highest sequence number, so that job will be the last job to be processed on the device.

4.4.7 Sequencing Jobs on a new load

If multiple jobs are added to a load, the sequence the jobs appear on the device can be determined by setting a Site level parameter.

Within the Site Maintenance screen, in the Admin tab there is a 'CSV Upload Sequence' list:

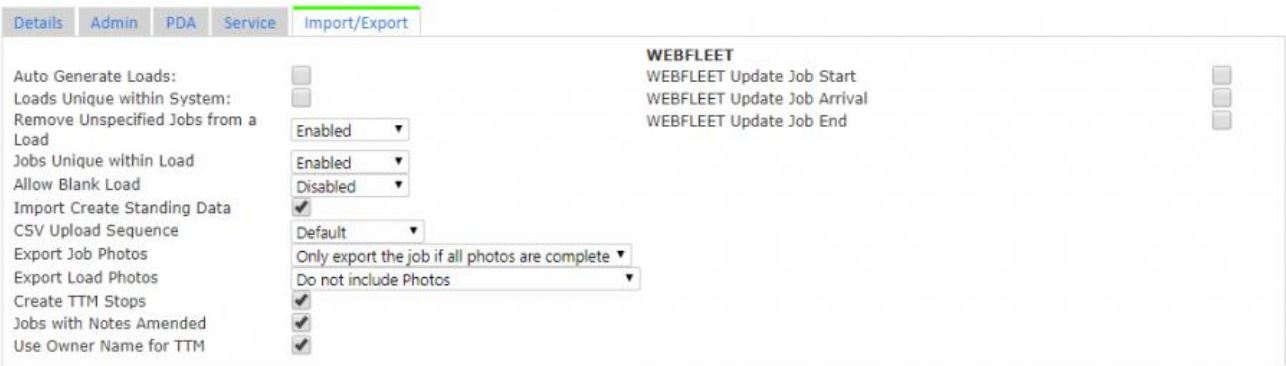


Figure 27: *Site Maintenance - CSV Upload Sequence setting.*

The value 'Default' will cause the jobs to be added in the order of the Load Planned Start Date/Time passed in, e.g.

columns 1 and 2.

The value 'Order Provided' will cause the jobs to be added in the sequence they are included in the file.

5 Appendix A: Document References

A.1 References

Ref No	Document Title & ID	Version	Date
1	UG 291094 EPOD Admin User Guide	4.5.00.02	09/04/2019
2	UG 291097 EPOD Client User Guide	4.0.2.21	02/04/2019

A.2 Glossary

Term or Acronym	Meaning
General Definitions	
EPOD	Electronic Proof of Delivery. The OBSL EPOD system is *CALIDUS* ePOD. This also comprises the basis of the Service Completion system *CALIDUS* eServ.
Server	The portion of the *CALIDUS* ePOD/eServ systems that controls all the data and sends information to and receives updates from the mobile device.
Mobile Device; PDA	The device used by the driver to perform the jobs. Typically an Android mobile device or tablet.
Site	The site usually defines the depot, business or the transport group (carrier). It can be set to any value required by the customer. All transactions data (for example, loads and jobs) and standing data (for example, vehicles and uses) belong to a site. An EPOD user, on a device or in the Admin screen, can only see data for one site at a time.
Load	A single journey for the driver with a set of work attached. A load is identified by a unique load ID. This may also be referred to as a worklist or workload.
Job	Also Consignment. A single task for the driver as a specific location. This could be the collection of goods or the delivery of goods. Jobs may also be Services (for example, servicing, installing or de-installing a boiler). A job is identified by a unique job ID but can also have other references held against the job (e.g. job code, SO number, customer reference and external reference).
Job Group	Jobs must be tagged with a Job Group. All jobs tagged with a single job group are processed in the same way. The job group has configuration associated to it to control such items as: POD/POC Report settings; Pre-Job actions (such as signing at a gatehouse); Post-Job actions (such as who signs for the item, are photos required); configurable fields required for entry for the jobs; Terms and Conditions displayed and; driver/user process (such as photos required for cancellation, comments/notes allowed). The job group can be used for any or all Sites, and the configuration against the job group can be different in each site. Job Groups can also be restricted from Admin and Remote users, so that certain users only see jobs for certain groups.
Container	A generic term for any object that contains the items being collected or delivered. Examples of containers are: Pallet; Package; Carton; Item; Cage. A special container "Loose Products" - see Product below. A container is identified by a container ID which is unique to this physical container.
Product	A product is any goods that are being collected or delivered where the product has a 'Product Code' which identifies what the product is but which does not uniquely identify each individual item. A product will also have a quantity associated with it to indicate how many items of this 'Product Code' are being collected or delivered. Products can either be processed within a 'Container' or as 'Loose Products' without a 'Container'.
Owner	The owner of the order that created the job. Typically this is the sales team that took the order and will be responsible for dealing with queries from the customer regarding the status.
Operator; Executor	The Site (depot or carrier) that is executing the load or loads that are involved in the delivery of the items.
Item Related Definitions	
Job Code	A reference associated with a job or job(s). This reference is common to connected jobs, for example this would be the same on both the collection of goods and the associated delivery of the same goods. Typically this would be the transport unique reference.
SO Number	A reference associated with a job which indicates the "Sales Order Number" this job is associated with.
Customer Reference	A reference associated with a job which has been provided by and will be recognised by the customer.
External Reference	

Term or Acronym	Meaning
	A reference associated with a job which does not match any of the existing references, usually because it has been provided by an external system.
Pallet	An alternative for 'Container'. The term pallet is used when the operation only uses portable platforms as the container for goods.
Package	An alternative for 'Container'. The term package is used when the operation only uses boxes or wrapping as containers for goods.
Package Code	A code representing the type of 'Container'.
Package Desc	A description of the type of 'Container'.
Product Code	A code which identifies what a product is.
Item	A generic term for any individual item that can be collected or delivered. An item can represent a 'Container' or a 'Product'. This can also be used as an alternative for 'Container' when the operation only treats the goods as individual items, i.e. not as identifiable products.
Service Item	An item which will be serviced by a service job. See action 'Service'.
Issue Life	The time after which an item is no longer fit for purpose.
Pack Size; Case Quantity	A product may consist of a full quantity of items, inside a pack. The Pack Size (or Case Quantity) defines the amount of this product contained in a single pack. For example, if there are 85 items to deliver, with a pack size of 24, the number of full packs is determined to be 3 (24 * 3, or 72), with the remaining (13) being 'loose' quantity. This is displayed as "3/13" on the mobile application.
UOM; Item Type	Unit of Measure; The major (case) UOM. This can optionally be displayed on the mobile device when changing product quantities.
Product Type	A classification of the product being delivered. For example, a company may deliver 7 different mortar products and 80 different concrete slab products. The Product Types may be set to "MORTAR" and "SLABS". This may be used to attach additional configuration, changing the data required when collecting or delivering these product types.
Status Definitions	
Status	An indicator of how far through the processing a 'Job', 'Container' or 'Product' has progressed.
Pending	A status indicating that the processing has not yet started, but is required to be completed.
In Progress	A status indicating that processing has started but not yet finished.
Complete	A status indicating that the 'Job', 'Container' or 'Product' has been collected or delivered.
Complete (Amended)	A status indicating that the 'Job', 'Container' or 'Product' has been collected or delivered but that some changes or amendments have been made. This means that not everything that was planned to be collected or delivered was collected or delivered, some items may have been cancelled or some products may only have had some of the planned quantities collected or delivered.
Complete (Claused)	A status indicating that the processing has been finished but that a 'Clause' condition has been recorded for this item.
Claused	See 'Complete (Claused)' and action 'Clause'.
Cancelled	A status indicating that the processing of this item or job is no longer required.
Cancelled at Collection	A status indicating that the delivery of a container or product is no longer required because the associated collection of this container or product was cancelled.
Submitted	An optional status that applies only to a 'Job' and which occurs after the 'Job' has been completed. This indicates that any time and expenses information recorded for the 'Job' has been submitted back to the server and can no longer be altered.
Action Definitions	
Start	An action associated with a 'Job' meaning the driver is about to start the processing of this job or jobs. This action will mark the job(s) with a status of 'In Progress'.
Arrive	A conditional action associated with a 'Job' meaning the driver has arrived at the location the goods should be collected from or delivered to.
Continue	An action associated with a 'Job' meaning the driver has previously performed the 'Start' and/or 'Arrive' action and has exited the processing screen but is now going to continue the processing.
Collect	An action associated with a specific 'Container' or a 'Product' meaning the driver has collected the 'Container' or 'Product'. This action will mark the 'Container' or 'Product' with a status of 'Complete' or 'Complete (Amended)'.
Collect Claused	An action associated with a specific 'Container' or a 'Product' meaning the driver has collected the 'Container' or 'Product' but with a condition under which the collection was accepted. This action will accept the clause condition and then mark the 'Container' or 'Product' with a status of 'Complete (Claused)'.

Term or Acronym	Meaning
Deliver	An action associated with a specific 'Container' or a 'Product' meaning the driver has delivered the 'Container' or 'Product'. This action will mark the 'Container' or 'Product' with a status of 'Complete' or 'Complete (Amended)'.
Deliver Claused	An action associated with a specific 'Container' or a 'Product' meaning the driver has delivered the 'Container' or 'Product' but with a condition under which the delivery was accepted. This action will accept the clause condition and then mark the 'Container' or 'Product' with a status of 'Complete (Claused)'.
Clause	An action associated with a specific 'Container' or a 'Product' that has already been collected or delivered meaning the collection or delivery has been accepted with a condition. This action will accept the clause condition and then mark the 'Container' or 'Product' with a status of 'Complete (Claused)'.
Cancel	An action associated with a 'Job', 'Container' or 'Product' meaning the collection or delivery will not be performed for this 'Job', 'Container' or 'Product'.
Submit	An optional action which can conditionally be carried out after a 'Job' has been collection or delivered meaning that any/all required expense or time recording for this 'Job' has been completed and can be submitted back to the server.
Service	A service of a service item or items. Typically, Installation, Deinstallation or Service. The process of a service usually encompasses Pre- and Port-work checks, information gathering and diagnosis and resolution notes. Additional references (MC Refs) may also be captured.
Actioned	A general term describing completing a job. So, 'Actioned' may be used instead of 'Collected', 'Serviced', 'Delivered'.
Consolidate	The action of taking several jobs and linking them together, so they are actioned at the same time with one start, arrive and signature.
Deconsolidate	The action of taking a consolidation of jobs and breaking them down into the component jobs again.
Job Swap	The action of selecting an existing load not assigned to the user, and picking jobs to transfer onto the user's load.
Signature Capture	Usually the final action of a job, where the customer's name and signature are entered.
Other Definitions	
Reason Code	A code which represents the reason that a job was cancelled or an item was cancelled or claused.
Vehicle	The vehicle used for transporting the goods.
Vehicle Checks	Also Defect Checks. A series of questions representing the results of checks intended to ensure the vehicle is in an acceptable condition.
Metrics Entry	A series of questions to capture information either at the start or end of a 'Load'.
Driver	The person performing the collections or deliveries; the user of the device/application.
Engineer	The person performing the services; the user of the device/application.
Customer	The person/company the goods are being collected from or delivered to.
Signatory	The name of the person providing a signature.
T&Cs	Terms and Conditions. The T&Cs are shown when signatures are prompted for. The text of the T&Cs are defined in the system itself.
Transfer Load	A load select from which to swap jobs to the user's load.
Base	E.g. 'Return to Base'. Typically the depot from which the driver departed.
Unplanned Ad Hoc Collection	A collection job that is created by the driver, usually after delivering to a customer.
Ad Hoc Container Entry/Scanning	The process of adding containers (items) to a job that have not been pre-advised on the job.
Completion Report	POD, POC, Service/Work Report.
Load Assignment	The action of assigning a vehicle and/or a driver to a load.
Job Assignment	The action of putting jobs onto a load.
Collection/Delivery Windows; Access Windows	Periods of time between which it is acceptable to deliver or collect from that customer. This has limited use in the system, mostly for reporting purposes.
Location/Map Terms	
Lat-Longs; GPS Co-ordinates, GPS Position	Latitude and Longitude co-ordinates, specified together as a single entity, identifying the exact position of a location. There are multiple formats - *CALIDUS* ePOD uses decimal notation, for example "53.3490818,-2.8521498" identifies the OBS Logistics office building in Liverpool.
GPS	

Term or Acronym	Meaning
	Global Positioning System; the satellite system used to obtain a GPS position, for use with navigation and location positioning.
Geocode; Reverse Geocode	Geocoding is the process of obtaining lat-longs from an address. Reverse Geocoding is the process obtaining an address from lat-longs.
Geofence; Geofence Break	A Geofence is a perimeter around a location. A Geofence Break occurs when a device passes through this perimeter on entry or exit from the location.

A.3 Authorised By

Murray Middleton	OBS Project Manager	_____
Tony Walker	OBS Consultant	_____

The data within *CALIDUS* ePOD can be created from many sources:

- Import of jobs, loads and standing data through standard web services.
- Import of jobs and loads through flat-file imports.
- Manual import of Jobs, Loads and Standing Data through the Admin system.
- Manual entry in the Admin system.

That data can be exported from *CALIDUS* ePOD in many ways:

- Requested Export through standard C-ePOD web services.
- Configured export through interfaces.
- XLS export through the Admin system.

This section covers import and export of data through configured interfaces.

All interfaces, import and export, are configured through the *CALIDUS* ePOD Admin system, using the Import/Export Interface screen, with the exception of the hosted web services for import and export of jobs and loads, which are always available to processes that request from these web services.

Import and Export configurations are grouped under Configuration ID, which must then be attached to a Site or Job Groups, through the appropriate maintenance screens. Each interface configured for that ID will then be run for that site or job group.

You can add multiples of each export type to each configuration, allowing for (for example) multiple exports of the same data when a single job or load is completed.

See Auto-Export for details of how this screen is operated.

Warning: **It is not enough to create an interface - you must attach a configuration to a site or job group, or the interfaces will never be run. The system will not generate exports for any jobs prior to the assignment of the Interface Configuration ID.**

The processes below note any exceptions to these general rules.

The general parameters are as follows:

Field	Value
EPL_XF_CONFIG_ID	As required. This may be set to the Site ID for Job and Load exports.
EPL_DESCRIPTION	As required
EPL_XF_TYPE	Transfer type - one of: SOAP, FTP, EMAIL, FILE, POST
EPL_XF_DESTINATION	The external URL for SOAP and POST exports, or the email for EMAIL export, or the folder for FILE imports and exports, or the FTP Server for FTP imports and exports.
EPL_XF_ID	The export type - see the individual sections below.

Field	Value
EPL_EXPORT_FULLHEADERS	Applies to LOAD export types only.
EPL_WEB_PARAMETER	Applies to SOAP-type exports only.
EPL_WEB_USER	Applies to SOAP, FILE and FTP exports only.
EPL_WEB_PASSWORD	Applies to SOAP, FILE and FTP exports only.
EPL_SOAP_ACTION	Applies to SOAP-type exports only.
EPL_SOAP_NS	Applies to SOAP-type exports only.
EPL_SOAP_NS_PREFIX	Applies to SOAP-type exports only.
EPL_XF_DIRECTION	O - Export, I - Import
EPL_XF_RECIPIENT	Multi-use. For EMAIL, the email address. For TomTom WEBFLEET interfaces, the provided WEBFLEET fleet.
EPL_EXPORT_JOB_TYPES	Defines the types of jobs that are exported through this format, of C (Collections), D (Deliveries) and S (Services).
EPL_XF_MSG_TYPE	Multi-use. For TomTom WEBFLEET interfaces, the provided WEBFLEET API Key. For TTM, the message types. For Job Imports, the file format type.
EPL_EXPORT_FORMAT	Multi-use. For TTM, the mode. For POD, the format of the file exported.
EPL_IMAGE_TYPE	Applies to POD exports only
EPL_TIFF_COMPRESSION	Applies to POD exports only
EPL_FILENAME	The export or import filename, plus insertions.
EPL_EMAIL_ERRORS	Supports emailing of failed files to the defined email address here. Only applies to some imports and exports.
EPL_INCLUDE_CSV_HEADER	Applies to OBS CSV Imports only - defines whether the import contains a line determining the fields being imported.
EPL_CONTRACT_OPERATION	Applies to SOAP-type exports only.
EPL_SOAP_VERSION	Applies to SOAP-type exports only. Defaults to text/xml;

5.1 Transfer Types

Standard Transfer types set in EPL_XF_TYPE are:

- *SOAP* - a SOAP web service.
- *FTP* - an FTP address.
- *EMAIL* - an Email address.
- *FILE* - a local or network file transfer.
- *POST* - a POST web service i.e. URL to a web page.

Typically, the destination set in EPL_XF_DESTINATION defines all transfer types.

5.1.1 FTP

Normally, the destination would be through a URL e.g. ftp://172.190.90.1, which would be configured on the destination to point to a default directory.

Anything after the base above e.g. ftp://172.190.90.1/ARC/IN/ would point to folders underneath that default directory.

The User and Password for the FTP site is defined in EPL_XF_WEB_USER and EPL_XF_WEB_PASSWORD.

5.1.2 EMAIL

The destination is set to be an email address or addresses. The delimiter is typically a comma (,) or semi-colon (;), depending on the email server the system is linked to.

Examples:

- a.name@company.com

- a.name@company.com; a.nother@company.com
- a.name@company.com, a.nother@company.com

5.1.3 FILE

The local, network or share name full file path is defined in the destination.

Example:

- Local file: C:\FILES\ABC\
- Network mapped: X:\FILES\ABC\
- Network file: \\1.2.3.4\FILES\ABC\
- Domain file: \\myserver\FILES\ABC\

5.1.4 POST

The destination is defined by the full URL of the page.

Example:

- http://my.url.com/mypage.asp

Typically this would not require a username and password, but could be defined in EPL_XF_WEB_USER and EPL_XF_WEB_PASSWORD.

5.1.5 SOAP

SOAP web services typically require a number of parameters in addition to POST parameters.

The destination is defined as the web service and method.

Example:

- http://my.url.com/mywebservice/method

Other parameters that may be required:

- EPL_WEB_PARAMETER - parameter for the web service e.g. EPOD_ACTUALS-XMLTYPE-IN
- EPL_WEB_USER - username for authenticated web services
- EPL_WEB_PASSWORD - password for authenticated web services
- EPL_SOAP_ACTION -
- EPL_SOAP_NS - namespace URL e.g. http://xmlns.oracle.com/orawsv/MTS_OWNER/DP_EPOD_WEB_SERVICE/EPOD_IN
- EPL_SOAP_NS_PREFIX the namespace ID for the namespace above.
- EPL_CONTRACT_OPERATION - additional level for the web service XML e.g. CXMLTYPE-EPOD_ININput

Typically, web service methods require bespoke content, so usually these settings must be completed in conjunction with a known web service type, as shown below.

5.2 File Naming

Generally, for FILE and FTP exports, the file naming default is based on the configuration.

If no filename is specified, the default is:

- EPOD_(EPL_RECIPIENT)_(EPL_XF_CONFIG_ID)_(DATE)_(TIME)_(UID).<ext>

where

- EPL_RECIPIENT - from the configuration
- EPL_XF_CONFIG_ID - from the configuration
- DATE - the current date in yyyyMMdd format
- TIME - the current time in HHmmss format
- UID - a unique identifier per record generated in that run
- ext - the defined extension of the file, based on the ID.

For example:

- EPOD_EUROPA_L02_20180201_104956_1.XML

Filename can be specified in the EPL_FILENAME parameter as any plain text plus the following job-level items:

- EPL_EXT_REF
- EPL_OWNER_NAME
- EPL_SO_NUMBER
- EPL_SITE_ID
- EPL_JOB_ID - a C-ePOD-generated unique identifier for the job for that site.
- EPL_LOAD_ID
- EPL_JOB_CODE
- EPL_CUST_REF
- EPL_CUSTOMER_CODE
- EPL_PF_DEPOT - the pallet network depot code
- DATE
- TIME
- UID

Note: The format is the field in parenthesis, so for example:

- EPOD_(EPL_RECIPIENT)_(EPL_SITE_ID)_(DATE)_(TIME)_(UID)

All JOB and Pallet Network exports using FTP or FILE will follow this Filename naming convention.

Where applicable to other types, this is shown below.

5.3 Core *CALIDUS* Exports

5.3.1 Job

For Export, if this configuration has the same name as the Site that it applies to, it need not be attached to a Site or Job Group through an XF Config ID.

This type exports and imports data through the C-ePOD standard XML format, through web services, file copy or FTP. Exports may also be emailed, where the XML is attached to an email and sent.

Note: This interface is used by *CALIDUS* TMS and *CALIDUS* Total Logistics.

This interface is triggered when a job is completed or cancelled (where the status has been set to "C" or "X").

Standard configuration is as follows:

Field	Value
EPL_XF_TYPE	Any type may be configured for Export. For Import, FILE and FTP are valid.
EPL_XF_DESTINATION	The external URL for SOAP and POST exports, or the email for EMAIL export, or the folder for FILE imports and exports, or the FTP Server for FTP imports and exports.
EPL_XF_ID	The export type, JOB.
EPL_EXPORT_FULLHEADERS	Normally "N" or unchecked.
EPL_EXPORT_JOB_TYPES	CD. Defining the job types that are exported. For example, C are collections, D are deliveries.

Example File Job Export:

Field	Value
EPL_XF_TYPE	FILE
EPL_XF_DESTINATION	C:\Test\Stirling\
EPL_XF_ID	JOB
EPL_EXPORT_FULLHEADERS	N
EPL_XF_DIRECTION	O
EPL_EXPORT_JOB_TYPES	CD

Example CALIDUS TMS Job Export:

Field	Value
EPL_XF_TYPE	SOAP
EPL_XF_DESTINATION	http://10.43.0.71:8011/orawsv/MTS_OWNER/DP_EPOD_WEB_SERVICE/EPOD_IN
EPL_XF_ID	JOB
EPL_EXPORT_FULLHEADERS	Y
EPL_WEB_PARAMETER	EPOD_ACTUALS-XMLTYPE-IN
EPL_WEB_USER	epod
EPL_WEB_PASSWORD	as provided
EPL_SOAP_ACTION	
EPL_SOAP_NS	http://xmlns.oracle.com/orawsv/MTS_OWNER/DP_EPOD_WEB_SERVICE/EPOD_IN
EPL_SOAP_NS_PREFIX	epod
EPL_XF_DIRECTION	O
EPL_EXPORT_JOB_TYPES	CD
EPL_CONTRACT_OPERATION	CXMLTYPE-EPOD_ININput

If no filename is specified for FTP or FILE export types for LOAD exports, the default is:

- EPOD_LOTS_(EPL_SITE_ID)_(DATE)_(TIME)_1

If EPL_FILENAME is provided, this will be translated as described generically.

5.3.2 Load

For Export, if this configuration has the same name as the Site that it applies to, it need not be attached to a Site or Job Group through an XF Config ID.

This type exports data through the C-ePOD standard XML format, through web services, file copy or FTP. Exports may also be emailed, where the XML is attached to an email and sent.

Note: This interface is used by *CALIDUS* TMS and *CALIDUS* Total Logistics.

This interface is triggered based on the when a load is started (where the status is "I"), completed or cancelled (where the status has been set to "C" or "X"), based on the configuration of the message (see below).

Standard configuration is as follows:

Field	Value
EPL_XF_TYPE	Any type may be configured for Export. For Import, FILE and FTP are valid.
EPL_XF_DESTINATION	The external URL for SOAP and POST exports, or the email for EMAIL export, or the folder for FILE imports and exports, or the FTP Server for FTP imports and exports.
EPL_XF_ID	The export type, LOAD
EPL_EXPORT_FULLHEADERS	Normally "N" or unchecked. If "Y", this will include the full content of all of the jobs on the load, making a further Job interface redundant. When "N", only the Load is exported, not the jobs.

Field	Value
EPL_EXPORT_JOB_TYPES	CD. Defining the job types that are exported, if full headers are set. For example, C are collections, D are deliveries.
EPL_XF_MESSAGE_TYPE	Determines thr message trigger point: START (when the load is in progress, END (when the load is completed or cancelled) or BOTH.

Example CALIDUS TMS Load Export:

Field	Value
EPL_XF_TYPE	SOAP
EPL_XF_DESTINATION	http://10.43.0.71:8011/orawsv/MTS_OWNER/DP_EPOD_WEB_SERVICE/EPOD_IN
EPL_XF_ID	LOAD
EPL_EXPORT_FULLHEADERS	Y
EPL_WEB_PARAMETER	EPOD_ACTUALS-XMLTYPE-IN
EPL_WEB_USER	epod
EPL_WEB_PASSWORD	as provided
EPL_SOAP_ACTION	
EPL_SOAP_NS	http://xmlns.oracle.com/orawsv/MTS_OWNER/DP_EPOD_WEB_SERVICE/EPOD_IN
EPL_SOAP_NS_PREFIX	epod
EPL_XF_DIRECTION	O
EPL_EXPORT_JOB_TYPES	CD
EPL_XF_MESSAGE_TYPE	BOTH
EPL_CONTRACT_OPERATION	CXMLTYPE-EPOD_ININput

If no filename is specified for FTP or FILE export types for LOAD exports, the default is:

- EPOD_LOTS_(EPL_SITE_ID)_(DATE)_(TIME)_1

If EPL_FILENAME is provided, this will be translated as described generically.

5.3.3 NAV2016

For connection to NAV2016, the following interface must be configured.

This interface sends back details of completed or cancelled jobs (Collections, Deliveries and Services) in the C-ePOD XML format to the NAV2016 web service, which works in the standard way.

Field	Value
EPL_XF_TYPE	SOAP
EPL_XF_DESTINATION	As confirmed, Example: https://nav16.in2grate.co.uk:7167/AELEPODUP/WS/A%26E%20Leisure%20Ltd./Codeunit/Get
EPL_XF_ID	NAV
EPL_EXPORT_FULLHEADERS	N
EPL_WEB_PARAMETER	xmlStrIn
EPL_WEB_USER	NAV-DEV\EPOD
EPL_WEB_PASSWORD	As confirmed
EPL_SOAP_ACTION	urn:microsoft-dynamics-schemas/codeunit/GetNAVData:ReturnNavDataAsXml
EPL_SOAP_NS	urn:microsoft-dynamics-schemas/codeunit/GetNAVData
EPL_SOAP_NS_PREFIX	nav
EPL_XF_DIRECTION	O
EPL_EXPORT_JOB_TYPES	CD
EPL_CONTRACT_OPERATION	ReturnNavDataAsXml
EPL_SOAP_VERSION	text/xml; charset=utf-8

5.3.4 *CALIDUS* Portal TTM

This interface must be created when *CALIDUS* ePOD and *CALIDUS* Portal TTM are implemented together, usually without *CALIDUS* TMS.

Details on the interface can be found in the EPOD-TTM Interface guide.

The interface sends through tracking messages at all states of the order, as follows:

- *ORD* - Details of the order, down to individual items.
- *TRP* - the Workload, grouping all the orders together for transport.
- *OIT* - Order In Transit.
- *ARR* - Arrived at destination.
- *DEL*/*COL* - Collected/Delivered - completed job, including all items, quantities and discrepancies.
- *CAN* - Cancelled job.
- *GPS* - Vehicle GPS Tracking messages.

Field	Value
EPL_XF_TYPE	FILE or FTP
EPL_XF_DESTINATION	The file folder e.g. E:\Portal\TTM\EDI\DEV\INBOUND\
EPL_XF_ID	TTM
EPL_XF_DIRECTION	O
EPL_XF_RECIPIENT	
EPL_EXPORT_JOB_TYPES	CD
EPL_XF_MSG_TYPE	TRP|CAN|DEL|OIT|ARR|GPS. If a message type is omitted, that message will not be sent. Typically, GPS is omitted.
EPL_EXPORT_FORMAT	Mode 1 or Mode 2 - see below for details.

For the different modes, the TTM fields are populated as follows:

Field	MODE 1	MODE 2
TMS Ref	Job Code	Job Code
SO Ref	Cust Ref if present, else Job Code	External Ref
Book Ref	External Ref	Cust Ref

If no filename is specified for FTP or FILE export types, the default is:

- EPOD_LOTS_(EPL_SITE_ID)_(TTM_TRACKING_STATUS)_(DATE)_(TIME)_(UID)

where TTM_TRACKING_STATUS is one of the TTM tracking statuses listed above. **Note:** Filenames should not be changed from this format.

5.3.5 Vehicle Checks

This interface is used when exporting Vehicle Checks to external systems.

Only those vehicle checks that have been marked as not yet exported will be included.

The format is the C-ePOD Vehicle Check XML Export format.

Field	Value
EPL_XF_TYPE	Any, but typically FILE or FTP or EMAIL
EPL_XF_DESTINATION	Depending on type
EPL_XF_ID	V

Note: All other parameters depend on the type selected.

If no filename is specified for FTP or FILE export types, the default is:

- EPOD_LOTS_(EPL_SITE_ID)_V_(DATE)_(TIME)_(UID)

Filename can be specified in the EPL_FILENAME parameter as described generically above.

5.3.6 Job Swap

This interface is used with *CALIDUS* TMS only, when Job Swaps are enabled. In this case, the interface must be enabled to reflect Job Swaps within C-TMS.

The interface format is C-ePOD XML.

Example configuration for C-TMS:

Field	Value
EPL_XF_TYPE	SOAP
EPL_XF_DESTINATION	http://10.43.0.71:8011/orawsv/MTS_OWNER/DP_EPOD_WEB_SERVICE/EPOD_IN
EPL_XF_ID	JOBSWAP
EPL_WEB_PARAMETER	EPOD_ACTUALS-XMLTYPE-IN
EPL_WEB_USER	epod
EPL_WEB_PASSWORD	as provided
EPL_SOAP_ACTION	
EPL_SOAP_NS	http://xmlns.oracle.com/orawsv/MTS_OWNER/DP_EPOD_WEB_SERVICE/EPOD_IN
EPL_SOAP_NS_PREFIX	epod
EPL_XF_DIRECTION	O
EPL_CONTRACT_OPERATION	CXMLTYPE-EPOD_INInput

If no filename is specified for FTP or FILE export types, the default is:

- EPOD_LOTS_(EPL_SITE_ID)_JOBSWAP_(DATE)_(TIME)_(UID)

Filename can be specified in the EPL_FILENAME parameter as described generically above.

5.3.7 PODs

This interface is typically used to update Document Management Systems (DMS) with completed POD/POC reports.

Note: Emails of PODs to customers and site email addresses are dealt with through a different interface - see Completion Report Emails for details.

The export is normally an image or PDF file.

Note: POD and POD2 are functionally identical, but are used to configure multiple exports from C-ePOD. Recent changes mean that these can now all be defined as POD rather than POD2, making this format redundant.

Types of FILE, FTP and EMAIL are supported.

Example format of POD message.

Field	Value
EPL_XF_TYPE	FILE (Types of FILE, FTP and EMAIL are supported.)
EPL_XF_DESTINATION	Destination Folder for example: C:\OUTBOUND\POD\
EPL_XF_ID	POD
EPL_WEB_USER	User for filesystem, if required.
EPL_WEB_PASSWORD	Password for filesystem, if required.
EPL_XF_DIRECTION	O
EPL_EXPORT_JOB_TYPES	D|S

Field	Value
EPL_EXPORT_FORMAT	Image (formats of HTML, Image, PDF)
EPL_IMAGE_TYPE	TIFF (image types of JPG, PNG, TIFF)
EPL_TIFF_COMPRESSION	FAX or Zip or None
EPL_FILENAME	Filename with insertions, for example: POD_(EPL_EXT_REF)_(DATE)_(TIME)_(UID)

If no filename is specified for FTP or FILE export types, the default is:

- EPOD_LOTS_(EPL_SITE_ID)_POD_(DATE)_(TIME)_(UID)

Filename can be specified in the EPL_FILENAME parameter as described generically above.

5.3.8 Invoices

To be able to email invoices you need to setup an appropriate Email Export Interface.

Example Invoice configuration:

Field	Value
EPL_XF_TYPE	EMAIL
EPL_XF_ID	Invoice
EPL_XF_DIRECTION	O
EPL_EXPORT_FORMAT	Html.

5.4 TomTom Export Interfaces

TomTom interfaces utilise the TomTom WEBFLEET web services to perform the following tasks.

Note: A WEBFLEET fleet, user and password will be required to use these services.

Warning: The TomTom WEBFLEET import and export processes will **not** process unless the automatic export and import processes have been set up and configured for TomTom WEBFLEET use - check with the system administrator.

5.4.1 Geocoder

The Geocoder service is used to generate Lat/Longs from addresses. As locations are created or updated, the LatLong will be requested to be updated.

Example format for TomTom Geocoder:

Field	Value
EPL_XF_TYPE	SOAP
EPL_XF_DESTINATION	https://soap.business.tomtom.com/v1.25/addressService
EPL_XF_ID	TG
EPL_WEB_PARAMETER	
EPL_WEB_USER	Provided WEBFLEET user
EPL_WEB_PASSWORD	Provided WEBFLEET password
EPL_SOAP_NS	http://connect.webfleet.tomtomwork.com/services
EPL_SOAP_NS_PREFIX	ser
EPL_XF_DIRECTION	O
EPL_XF_RECIPIENT	Provided WEBFLEET fleet
EPL_XF_MSG_TYPE	WEBFLEET API Key - for CALIDUS ePOD this is 000fcb2a-6631-477a-b00e-de0505e7c7e3
EPL_EXPORT_FORMAT	An optional control of how to send address information to WEBFLEET.
EPL_CONTRACT_OPERATION	geocodeAddress

The process can be configured to send addresses to the TomTom WEBFLEET geocoder in 2 main formats:

- Fixed.
- Freetext.

In Fixed mode, the process will send the following data to the geocoder:

- Street, set as Address Line 1.
- Postcode.
- Country, set by default to 'GB'. The OBS Logistics implementation team can configure this to any other country by default.

This is the default mode, when EPL_EXPORT_FORMAT is left blank. This method is useful when the address data in C-ePOD has been fixed by the customer, so that address line 1 is always the street. However, it does not account for data where a company name is provided in address line 1, nor can it use any places of interest (POI) databases provided by WEBFLEET to make the returned location more specific.

In Freetext mode, the process builds a free-text address from portions of the address being geocoded. The configuration of EPL_EXPORT_FORMAT governs the data sent through, as follows:

- If the string includes "N", the name is included in the free-text address.
- If the string includes "1", the first line of the address is included in the free-text address.
- If the string includes "2", the second line of the address is included in the free-text address.
- If the string includes "3", the third line of the address is included in the free-text address.
- If the string includes "4", the fourth line of the address is included in the free-text address.
- If the string includes "5", the fifth line of the address is included in the free-text address.
- If the string includes "P", the postcode is included in the free-text address.

Although this process is looser for WEBFLEET, the ability to control any of the address fields the process sends to the geocoder means that the results, when configured correctly, can be much more accurate.

Examples:

For an address as follows:

- Name - "My Company"
- Address Line 1 - "123 Acacia Avenue"
- Address Line 2 - "Anywheretown"
- Address Line 3 - ""
- Address Line 4 - "Anywhereshire"
- Address Line 5 - ""
- Postcode - "NE14 10S"

Example 1 - Fixed:

The process sends through the following data:

- Street - "123 Acacia Avenue"
- Postcode - "NE14 10S"
- Country - "GB"

Example 2 - Freetext:

Where the configuration is "N124P", the process sends through the following data:

- Freetext- "My Company 123 Acacia Avenue Anywheretown Anywhereshire NE14 10S"

Example 3 - Freetext:

Where the configuration is "1P", the process sends through the following data:

- Freetext- "123 Acacia Avenue NE14 10S"

5.4.2 TomTom WEBFLEET Orders

This interface is used to export workloads of orders out to WEBFLEET to appear on WEBFLEET head units as a kind of Job List.

Note: In order for these messages to be interfaced, the workload must be assigned to a vehicle with a valid TomTom WEBFLEET external ID, and the workload must be in progress.

The interface will handle deleting orders from a head-unit and creating new orders.

The message uses a combination of WEBFLEET web service methods, and are fixed and bespoke for this interface.

Example format for TomTom WEBFLEET Orders:

Field	Value
EPL_XF_TYPE	SOAP
EPL_XF_DESTINATION	https://soap.business.tomtom.com/v1.25/ordersService
EPL_XF_ID	TO
EPL_WEB_PARAMETER	
EPL_WEB_USER	Provided WEBFLEET user
EPL_WEB_PASSWORD	Provided WEBFLEET password
EPL_SOAP_NS	http://connect.webfleet.tomtomwork.com/services
EPL_SOAP_NS_PREFIX	ser
EPL_XF_DIRECTION	O
EPL_XF_RECIPIENT	Provided WEBFLEET fleet
EPL_XF_MSG_TYPE	WEBFLEET API Key - for CALIDUS ePOD this is 000fcb2a-6631-477a-b00e-de0505e7c7e3
EPL_CONTRACT_OPERATION	geocodeAddress

5.5 HERE Geocoder

Note: Valid HERE account details are required to use these services.

The Geocoder service is used to generate Lat/Longs from addresses. As locations are created or updated, the LatLong will be requested to be updated.

Example format for TomTom Geocoder:

Field	Value
EPL_XF_TYPE	POST
EPL_XF_DESTINATION	https://geocoder.api.here.com/6.2/geocode.xml
EPL_XF_ID	HG
EPL_XF_DIRECTION	O
EPL_XF_RECIPIENT	Provided HERE account
EPL_XF_MSG_TYPE	Provided HERE API Key
EPL_EXPORT_FORMAT	An optional control of how to send address information to WEBFLEET.

The process builds a free-text address from portions of the address being geocoded. The configuration of EPL_EXPORT_FORMAT governs the data sent through, as follows:

- If the string includes "N", the name is included in the free-text address.
- If the string includes "1", the first line of the address is included in the free-text address.

- If the string includes "2", the second line of the address is included in the free-text address.
- If the string includes "3", the third line of the address is included in the free-text address.
- If the string includes "4", the fourth line of the address is included in the free-text address.
- If the string includes "5", the fifth line of the address is included in the free-text address.
- If the string includes "P", the postcode is included in the free-text address.

Examples:

For an address as follows:

- Name - "My Company"
- Address Line 1 - "123 Acacia Avenue"
- Address Line 2 - "Anywheretown"
- Address Line 3 - ""
- Address Line 4 - "Anywhereshire"
- Address Line 5 - ""
- Postcode - "NE14 10S"

Example 1:

Where the configuration is "N124P", the process sends through the following data:

- Freetext- "My Company 123 Acacia Avenue Anywheretown Anywhereshire NE14 10S"

Example 2:

Where the configuration is "1P", the process sends through the following data:

- Freetext- "123 Acacia Avenue NE14 10S"

5.6 External Tracking System Exports

External tracking system updates are generally bespoke services required to be updated by specific carriers.

As such, they are typically attached to a specific Job Group, and will be exported along with the general Site configuration when the job is updated to comp[lete or cancelled.

Note: For most of these messages, additional information is required on receiving the job:

- PF Depot - Depot for external tracking
- PF Tracking Number - the external tracking reference

5.6.1 PalletForce

The Palletforce configuration is attached directly to the PALLET job group and site without setting an XF Config ID, and requires specific configuration of the name to the Site and PF Depot - please contact your OBSL representatives for details.

For example, for a PalletForce job, for site L02, with PalletForce depot code 177, this would be configured with an XF Config ID of "PALLETL02_177".

A flat-file interface of FILE or FTP is required.

The interface updates each pallet and consignment, and provides the signature.

Example Palletforce configuration:

Field	Value
EPL_XF_TYPE	FTP
EPL_XF_DESTINATION	ftp://10.43.0.73/testftp/
EPL_XF_ID	PF
EPL_EXPORT_FULLHEADERS	
EPL_WEB_PARAMETER	
EPL_WEB_USER	Provided FTP or filesystem username
EPL_WEB_PASSWORD	Provided FTP or filesystem password
EPL_EXPORT_JOB_TYPES	D

5.6.2 PALLEX

This is a SOAP web service only to the Pallex TWINE system.

The interface updates each pallet and consignment, and provides the signature.

Example Pallex configuration:

Field	Value
EPL_XF_TYPE	SOAP
EPL_XF_DESTINATION	Web service URL e.g. http://82.3.53.216/depotcustomer.asmx
EPL_XF_ID	PALLEX
EPL_WEB_USER	Provided Pallex TWINE username
EPL_WEB_PASSWORD	Provided Pallex TWINE password
EPL_SOAP_NS	http://tempuri.org/
EPL_SOAP_NS_PREFIX	tem
EPL_XF_DIRECTION	O
EPL_EXPORT_JOB_TYPES	D

5.6.3 TPN

This is a SOAP web service only to the TPN Connect system.

The TPN configuration is attached directly to the TPN job group and site without setting an XF Config ID, and requires specific configuration of the name to the Site and PF Depot - please contact your OBSL representatives for details.

For example, for a TPN job, for site L02, with TPN depot code 177, this would be configured with an XF Config ID of "TPNL02_177".

The interface sends one message per consignment, to update a pallet and consignment with delivery, signatory and signature information.

Example TPN configuration:

Field	Value
EPL_XF_TYPE	SOAP
EPL_XF_DESTINATION	http://dev.tpnconnect.com:3268/ThirdPartyServices.svc
EPL_XF_ID	TPN
EPL_WEB_USER	Provided TPN Connect username
EPL_WEB_PASSWORD	Provided TPN Connect password
EPL_SOAP_NS	http://schemas.datacontract.org/2004/07/ConnectSystem.Models.Integration;http://tempuri.org/

Field	Value
EPL_SOAP_NS_PREFIX	con;tem
EPL_XF_DIRECTION	O
EPL_EXPORT_JOB_TYPES	D

5.6.4 EUROPA

The Eurpoa configuration is attached directly to the EUROPA job group and site without setting an XF Config ID, and requires specific configuration of the name to the Site and PF Depot - please contact your OBSL representatives for details.

A flat-file interface of FILE or FTP is required.

Europa systems match the OBS XML file format.

Example Europa configuration:

Field	Value
EPL_XF_TYPE	FTP
EPL_XF_DESTINATION	ftp://ftp.europa-worldwide.com
EPL_XF_ID	JOB
EPL_EXPORT_FULLHEADERS	N
EPL_WEB_USER	Provided FTP or filesystem username
EPL_WEB_PASSWORD	Provided FTP or filesystem password
EPL_XF_RECIPIENT	EUROPA
EPL_EXPORT_JOB_TYPES	D

5.6.5 GAP

This is a flat-file exort only of GAP 861 messages in ANSI X12 format.

A flat-file interface of FILE or FTP is required.

Note: This interface requires a secure middleware interface, as GAP only accepts files from trusted sources.

Example GAP 861 configuration:

Field	Value
EPL_XF_TYPE	FILE
EPL_XF_DESTINATION	C:\FILES\GAP
EPL_XF_ID	GAP861
EPL_WEB_USER	Provided FTP or filesystem username
EPL_WEB_PASSWORD	Provided FTP or filesystem password
EPL_XF_DIRECTION	O
EPL_XF_RECIPIENT	GAP
EPL_EXPORT_JOB_TYPES	CD
EPL_EMAIL_ERRORS	Supports emailing of failed files to the defined email address here.

For FILE and FTP exports, the file naming default is based on the configuration.

If no filename is specified for FTP or FILE export types, the default is:

- EPOD_(EPL_RECIPIENT)_(EPL_XF_ID)_(DATE)_(TIME)_(UID)

Filename can be specified in the EPL_FILENAME parameter as described generically above.

5.6.6 Palletline

This is a FTP flatfile update to the Palletline Contrado system.

The interface sends one message per consignment, to update a pallet and consignment with delivery, signatory and signature information.

If this is configured, the system will also send one Arrival message per consignment.

Example Palletline configuration:

Field	Value
EPL_XF_TYPE	FILE
EPL_XF_DESTINATION	E:\ftpserver\customer\out
EPL_XF_ID	PLINE
EPL_XF_DIRECTION	O

5.6.7 Hazchem

This is a FTP flatfile update to the Hazchem HazchemOnline system.

The interface sends one message per consignment, to update a pallet and consignment with delivery, signatory and signature information.

If this is configured, the system will also send one Arrival message per consignment.

Example Hazchem configuration:

Field	Value
EPL_XF_TYPE	FILE
EPL_XF_DESTINATION	E:\ftpserver\customer\out
EPL_XF_ID	HAZCHEM
EPL_XF_DIRECTION	O

5.7 Imports

For FILE-type job and load imports, the import file is archived in a configured archive directory, which can be Site-related. The same is true of files that error on import.

5.7.1 OBS XML

This interface defines imports of Jobs, Loads and standing data in the C-ePOD XML format, as used by the web services.

In all ways, this operates as the standard web services, except that this can process an XML flat file.

Example XML Import configuration:

Field	Value
EPL_XF_TYPE	FILE only
EPL_XF_DESTINATION	Import folder e.g. C:\INBOUND\MSG_TYPE\IN
EPL_XF_ID	JOB
EPL_WEB_PARAMETER	
EPL_WEB_USER	Provided FTP or filesystem username
EPL_WEB_PASSWORD	Provided FTP or filesystem password

Field	Value
EPL_XF_DIRECTION	I
EPL_XF_MSG_TYPE	X
EPL_EMAIL_ERRORS	Supports emailing of failed files to the defined email address here.

5.7.2 OBS CSV

This is a feature-limited import in CSV format only. This is typically only used when external systems cannot match the XML format. This matches the import through the Admin Import screen for jobs.

This interface allows creation of Loads, Collection and Delivery jobs, with Containers and/or products.

Example OBS CSV Import configuration:

Field	Value
EPL_XF_TYPE	FTP or FILE
EPL_XF_DESTINATION	Import folder e.g. C:\INBOUND\MSG_TYPE\IN
EPL_XF_ID	JOB
EPL_WEB_PARAMETER	
EPL_WEB_USER	Provided FTP or filesystem username
EPL_WEB_PASSWORD	Provided FTP or filesystem password
EPL_XF_DIRECTION	I
EPL_XF_MSG_TYPE	GEN or Blank
EPL_EMAIL_ERRORS	Supports emailing of failed files to the defined email address here.

5.7.3 Partnerlink JobShare Format

This is a feature-limited import in CSV format only. This is typically only used when external systems cannot match the XML format. This matches the import through the Admin Import screen for jobs.

This interface creates pallets for delivery based on the quantity against a single line, assigning IDs in a specified format, counting the pallets sequentially.

Example Partnerlink CSV Import configuration:

Field	Value
EPL_XF_TYPE	FTP or FILE
EPL_XF_DESTINATION	Import folder e.g. C:\INBOUND\MSG_TYPE\IN
EPL_XF_ID	JOB
EPL_WEB_PARAMETER	
EPL_WEB_USER	Provided FTP or filesystem username
EPL_WEB_PASSWORD	Provided FTP or filesystem password
EPL_XF_DIRECTION	I
EPL_XF_RECIPIENT	For non-Vigo imports, replaces occurrences of AKW in the destination path with the value in this field.
EPL_XF_MSG_TYPE	P
EPL_EMAIL_ERRORS	Supports emailing of failed files to the defined email address here.

5.7.4 TomTom WEBFLEET Update

This interface is used to pull back updates from TomTom WEBFLEET, to use in Planned vs Actuals reporting at a detailed level.

Warning: This process needs setting up just once for the TomTom fleet, regardless of how many sites there are, as the returned data is per fleet not per site. This interface need not be attached to a Site or Job Group to be effective.

Warning: The TomTom WEBFLEET import and export processes will **not** process unless the automatic export and import processes have been set up and configured for TomTom WEBFLEET use - check with the system administrator.

The interface will capture distance and time from TomTom WEBFLEET. It can also capture breaks on the device.

Note: This interface requires a message queue configured on TomTom WEBFLEET to operate effectively. If one is not created, the process will create one the first time it is run, but no data prior to that point will be imported.

Example format for TomTom WEBFLEET Orders Inbound:

Field	Value
EPL_XF_TYPE	SOAP
EPL_XF_DESTINATION	https://soap.business.tomtom.com/v1.28/messagesService
EPL_XF_ID	TO
EPL_WEB_USER	Provided WEBFLEET user
EPL_WEB_PASSWORD	Provided WEBFLEET password
EPL_SOAP_NS	http://connect.webfleet.tomtomwork.com/services
EPL_SOAP_NS_PREFIX	ser
EPL_XF_DIRECTION	I
EPL_XF_RECIPIENT	Provided WEBFLEET fleet
EPL_XF_MSG_TYPE	WEBFLEET API Key - for CALIDUS ePOD this is 000fcb2a-6631-477a-b00e-de0505e7c7e3

5.7.5 DiPS Route Creation/Optimisation

This interface will import and create or update jobs and workload from the DiPS route optimiser.

The interface processes DiPS export files and supports the standard for DiPS - CSV files. All known fields are supported, although only a few of the fields are mapped to *CALIDUS* ePOD data - please contact your OBSL representatives for details of this mapping.

The file can be imported through FTP or FILE types.

Example format for the DiPS route optimiser:

Field	Value
EPL_XF_TYPE	FILE
EPL_XF_DESTINATION	C:\EPOD_DATA\EPOD_LOCALHOST\INBOUND\[SITE_ID]\IMPORT\IN
EPL_XF_ID	DIPS
EPL_XF_DIRECTION	I
EPL_XF_MSG_TYPE	GEN
EPL_FILENAME	DIPS2EPOD_[YYYYMMDD].xls
EPL_EMAIL_ERRORS	Supports emailing of failed files to the defined email address here.

5.7.6 EBB Import

This is a feature-limited bespoke import in multiple parts. This is used by a single client.

Note: As a bespoke interface, this is likely of limited re-use. However, this may be of use when utilising Great Plains / Microsoft Dynamics GP WMS/ERP software. This requires a manifest file produced from the pick list, and an MSA view onto the database to operate successfully

This interface allows creation of Loads, Collection and Delivery jobs, with products.

Example EBB Import configuration:

Field	Value

Field	Value
EPL_XF_TYPE	FTP or FILE
EPL_XF_DESTINATION	Import folder e.g. C:\INBOUND\MSG_TYPE\IN for the XML Manifest file
EPL_XF_ID	EBB
EPL_DB_CONNECTION	Data connection information to the MSA View: "Data Source=<ip>, <port>;Initial Catalog=<db>;User Id=<user>;Password=<pass>", replacing the '<*>' parameters with the required configuration.

5.8 *CALIDUS* Device Settings

Import/Export configurations can also be used on the mobile device. Specific configurations for the device can be configured in the same way. The acceptable interfaces are shown below.

5.8.1 TomTom WEBFLEET Device Settings

These settings are used on the device to connect to WEBFLEET and obtain the vehicle that the device is connected to, using the WEBFLEET user ID. The Odometer reading is also retrieved.

Example format for TomTom WEBFLEET Device Settings:

Field	Value
EPL_XF_TYPE	SOAP
EPL_XF_DESTINATION	https://soap.business.tomtom.com/v1.31/objectsAndPeopleReportingService
EPL_XF_ID	TD
EPL_WEB_USER	Provided WEBFLEET user
EPL_WEB_PASSWORD	Provided WEBFLEET password
EPL_SOAP_NS	http://connect.webfleet.tomtomwork.com/services
EPL_SOAP_NS_PREFIX	ser
EPL_XF_DIRECTION	D (Device)
EPL_XF_RECIPIENT	Provided WEBFLEET fleet
EPL_XF_MSG_TYPE	WEBFLEET API Key - for CALIDUS ePOD this is 000fcb2a-6631-477a-b00e-de0505e7c7e3

6 Appendix A: Document References

A.1 References

Ref No	Document Title & ID	Version	Date
1	UG 291094 EPOD Admin User Guide	4.5.00.02	08/04/2019
2	UG 291097 EPOD Client User Guide	4.0.2.21	02/04/2019

A.2 Glossary

Term or Acronym	Meaning
General Definitions	
EPOD	Electronic Proof of Delivery. The OBSL EPOD system is *CALIDUS* ePOD. This also comprises the basis of the Service Completion system *CALIDUS* eServ.
Server	The portion of the *CALIDUS* ePOD/eServ systems that controls all the data and sends information to and receives updates from the mobile device.
Mobile Device; PDA	The device used by the driver to perform the jobs. Typically an Android mobile device or tablet.
Site	The site usually defines the depot, business or the transport group (carrier). It can be set to any value required by the customer. All transactions data (for example, loads and jobs) and standing data (for example, vehicles and uses) belong to a site. An EPOD user, on a device or in the Admin screen, can only see data for one site at a time.
Load	A single journey for the driver with a set of work attached. A load is identified by a unique load ID. This may also be referred to as a worklist or workload.
Job	Also Consignment. A single task for the driver as a specific location. This could be the collection of goods or the delivery of goods. Jobs may also be Services (for example, servicing, installing or de-installing a boiler). A job is identified by a unique job ID but can also have other references held against the job (e.g. job code, SO number, customer reference and external reference).
Job Group	Jobs must be tagged with a Job Group. All jobs tagged with a single job group are processed in the same way. The job group has configuration associated to it to control such items as: POD/POC Report settings; Pre-Job actions (such as signing at a gatehouse); Post-Job actions (such as who signs for the item, are photos required); configurable fields required for entry for the jobs; Terms and Conditions displayed and; driver/user process (such as photos required for cancellation, comments/notes allowed). The job group can be used for any or all Sites, and the configuration against the job group can be different in each site. Job Groups can also be restricted from Admin and Remote users, so that certain users only see jobs for certain groups.
Container	A generic term for any object that contains the items being collected or delivered. Examples of containers are: Pallet; Package; Carton; Item; Cage. A special container "Loose Products" - see Product below. A container is identified by a container ID which is unique to this physical container.
Product	A product is any goods that are being collected or delivered where the product has a 'Product Code' which identifies what the product is but which does not uniquely identify each individual item. A product will also have a quantity associated with it to indicate how many items of this 'Product Code' are being collected or delivered. Products can either be processed within a 'Container' or as 'Loose Products' without a 'Container'.
Owner	The owner of the order that created the job. Typically this is the sales team that took the order and will be responsible for dealing with queries from the customer regarding the status.
Operator; Executor	The Site (depot or carrier) that is executing the load or loads that are involved in the delivery of the items.
Item Related Definitions	
Job Code	A reference associated with a job or job(s). This reference is common to connected jobs, for example this would be the same on both the collection of goods and the associated delivery of the same goods. Typically this would be the transport unique reference.
SO Number	A reference associated with a job which indicates the "Sales Order Number" this job is associated with.
Customer Reference	A reference associated with a job which has been provided by and will be recognised by the customer.
External Reference	

Term or Acronym	Meaning
	A reference associated with a job which does not match any of the existing references, usually because it has been provided by an external system.
Pallet	An alternative for 'Container'. The term pallet is used when the operation only uses portable platforms as the container for goods.
Package	An alternative for 'Container'. The term package is used when the operation only uses boxes or wrapping as containers for goods.
Package Code	A code representing the type of 'Container'.
Package Desc	A description of the type of 'Container'.
Product Code	A code which identifies what a product is.
Item	A generic term for any individual item that can be collected or delivered. An item can represent a 'Container' or a 'Product'. This can also be used as an alternative for 'Container' when the operation only treats the goods as individual items, i.e. not as identifiable products.
Service Item	An item which will be serviced by a service job. See action 'Service'.
Issue Life	The time after which an item is no longer fit for purpose.
Pack Size; Case Quantity	A product may consist of a full quantity of items, inside a pack. The Pack Size (or Case Quantity) defines the amount of this product contained in a single pack. For example, if there are 85 items to deliver, with a pack size of 24, the number of full packs is determined to be 3 (24 * 3, or 72), with the remaining (13) being 'loose' quantity. This is displayed as "3/13" on the mobile application.
UOM; Item Type	Unit of Measure; The major (case) UOM. This can optionally be displayed on the mobile device when changing product quantities.
Product Type	A classification of the product being delivered. For example, a company may deliver 7 different mortar products and 80 different concrete slab products. The Product Types may be set to "MORTAR" and "SLABS". This may be used to attach additional configuration, changing the data required when collecting or delivering these product types.
Status Definitions	
Status	An indicator of how far through the processing a 'Job', 'Container' or 'Product' has progressed.
Pending	A status indicating that the processing has not yet started, but is required to be completed.
In Progress	A status indicating that processing has started but not yet finished.
Complete	A status indicating that the 'Job', 'Container' or 'Product' has been collected or delivered.
Complete (Amended)	A status indicating that the 'Job', 'Container' or 'Product' has been collected or delivered but that some changes or amendments have been made. This means that not everything that was planned to be collected or delivered was collected or delivered, some items may have been cancelled or some products may only have had some of the planned quantities collected or delivered.
Complete (Claused)	A status indicating that the processing has been finished but that a 'Clause' condition has been recorded for this item.
Claused	See 'Complete (Claused)' and action 'Clause'.
Cancelled	A status indicating that the processing of this item or job is no longer required.
Cancelled at Collection	A status indicating that the delivery of a container or product is no longer required because the associated collection of this container or product was cancelled.
Submitted	An optional status that applies only to a 'Job' and which occurs after the 'Job' has been completed. This indicates that any time and expenses information recorded for the 'Job' has been submitted back to the server and can no longer be altered.
Action Definitions	
Start	An action associated with a 'Job' meaning the driver is about to start the processing of this job or jobs. This action will mark the job(s) with a status of 'In Progress'.
Arrive	A conditional action associated with a 'Job' meaning the driver has arrived at the location the goods should be collected from or delivered to.
Continue	An action associated with a 'Job' meaning the driver has previously performed the 'Start' and/or 'Arrive' action and has exited the processing screen but is now going to continue the processing.
Collect	An action associated with a specific 'Container' or a 'Product' meaning the driver has collected the 'Container' or 'Product'. This action will mark the 'Container' or 'Product' with a status of 'Complete' or 'Complete (Amended)'.
Collect Claused	An action associated with a specific 'Container' or a 'Product' meaning the driver has collected the 'Container' or 'Product' but with a condition under which the collection was accepted. This action will accept the clause condition and then mark the 'Container' or 'Product' with a status of 'Complete (Claused)'.

Term or Acronym	Meaning
Deliver	An action associated with a specific 'Container' or a 'Product' meaning the driver has delivered the 'Container' or 'Product'. This action will mark the 'Container' or 'Product' with a status of 'Complete' or 'Complete (Amended)'.
Deliver Claused	An action associated with a specific 'Container' or a 'Product' meaning the driver has delivered the 'Container' or 'Product' but with a condition under which the delivery was accepted. This action will accept the clause condition and then mark the 'Container' or 'Product' with a status of 'Complete (Claused)'.
Clause	An action associated with a specific 'Container' or a 'Product' that has already been collected or delivered meaning the collection or delivery has been accepted with a condition. This action will accept the clause condition and then mark the 'Container' or 'Product' with a status of 'Complete (Claused)'.
Cancel	An action associated with a 'Job', 'Container' or 'Product' meaning the collection or delivery will not be performed for this 'Job', 'Container' or 'Product'.
Submit	An optional action which can conditionally be carried out after a 'Job' has been collection or delivered meaning that any/all required expense or time recording for this 'Job' has been completed and can be submitted back to the server.
Service	A service of a service item or items. Typically, Installation, Deinstallation or Service. The process of a service usually encompasses Pre- and Port-work checks, information gathering and diagnosis and resolution notes. Additional references (MC Refs) may also be captured.
Actioned	A general term describing completing a job. So, 'Actioned' may be used instead of 'Collected', 'Serviced', 'Delivered'.
Consolidate	The action of taking several jobs and linking them together, so they are actioned at the same time with one start, arrive and signature.
Deconsolidate	The action of taking a consolidation of jobs and breaking them down into the component jobs again.
Job Swap	The action of selecting an existing load not assigned to the user, and picking jobs to transfer onto the user's load.
Signature Capture	Usually the final action of a job, where the customer's name and signature are entered.
Other Definitions	
Reason Code	A code which represents the reason that a job was cancelled or an item was cancelled or claused.
Vehicle	The vehicle used for transporting the goods.
Vehicle Checks	Also Defect Checks. A series of questions representing the results of checks intended to ensure the vehicle is in an acceptable condition.
Metrics Entry	A series of questions to capture information either at the start or end of a 'Load'.
Driver	The person performing the collections or deliveries; the user of the device/application.
Engineer	The person performing the services; the user of the device/application.
Customer	The person/company the goods are being collected from or delivered to.
Signatory	The name of the person providing a signature.
T&Cs	Terms and Conditions. The T&Cs are shown when signatures are prompted for. The text of the T&Cs are defined in the system itself.
Transfer Load	A load select from which to swap jobs to the user's load.
Base	E.g. 'Return to Base'. Typically the depot from which the driver departed.
Unplanned Ad Hoc Collection	A collection job that is created by the driver, usually after delivering to a customer.
Ad Hoc Container Entry/Scanning	The process of adding containers (items) to a job that have not been pre-advised on the job.
Completion Report	POD, POC, Service/Work Report.
Load Assignment	The action of assigning a vehicle and/or a driver to a load.
Job Assignment	The action of putting jobs onto a load.
Collection/Delivery Windows; Access Windows	Periods of time between which it is acceptable to deliver or collect from that customer. This has limited use in the system, mostly for reporting purposes.
Location/Map Terms	
Lat-Longs; GPS Co-ordinates, GPS Position	Latitude and Longitude co-ordinates, specified together as a single entity, identifying the exact position of a location. There are multiple formats - *CALIDUS* ePOD uses decimal notation, for example "53.3490818,-2.8521498" identifies the OBS Logistics office building in Liverpool.
GPS	

Term or Acronym	Meaning
	Global Positioning System; the satellite system used to obtain a GPS position, for use with navigation and location positioning.
Geocode; Reverse Geocode	Geocoding is the process of obtaining lat-longs from an address. Reverse Geocoding is the process obtaining an address from lat-longs.
Geofence; Geofence Break	A Geofence is a perimeter around a location. A Geofence Break occurs when a device passes through this perimeter on entry or exit from the location.

A.3 Authorised By

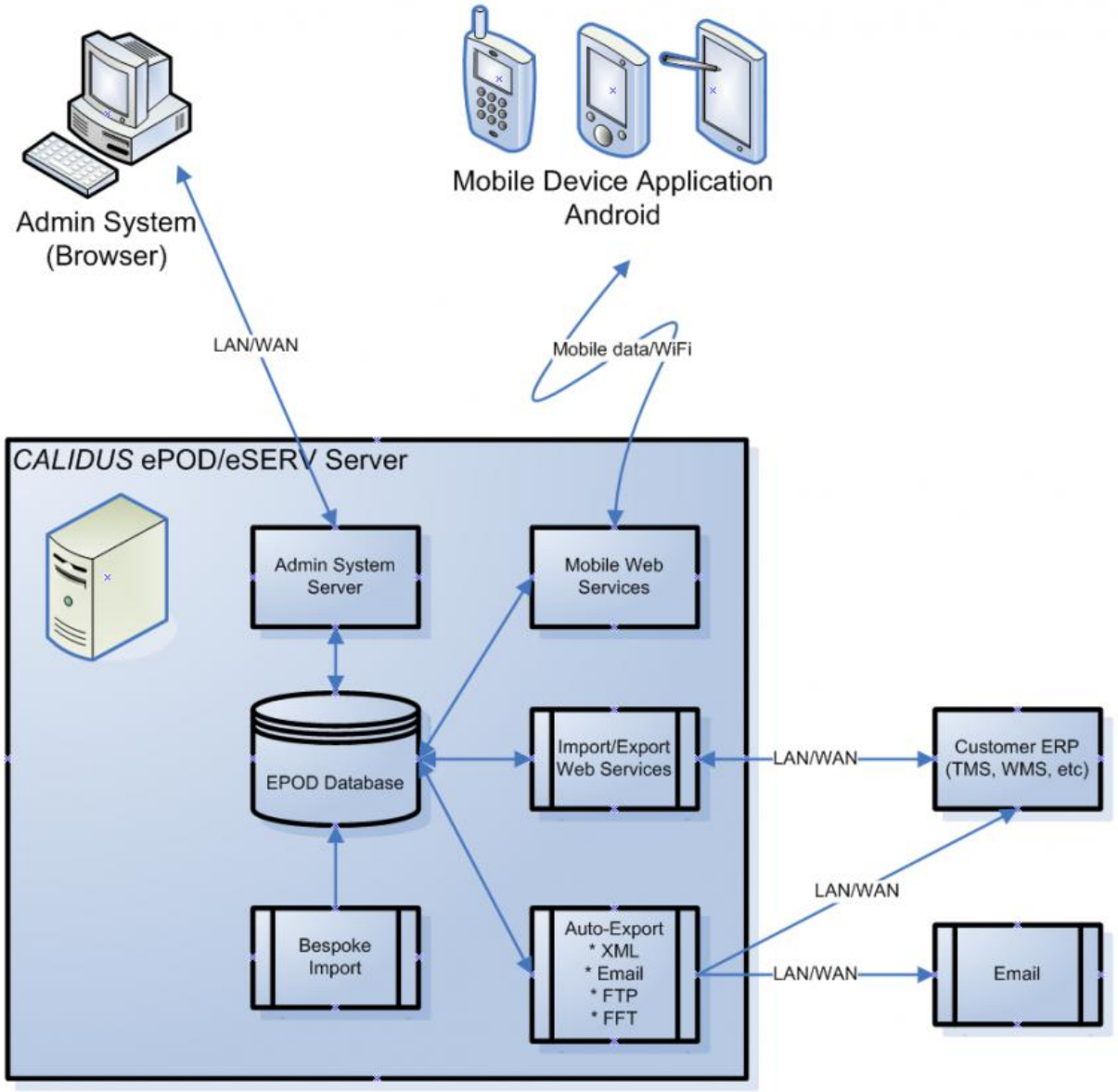
Murray Middleton	OBS Project Manager	_____
Tony Walker	OBS Consultant	_____

7 *CALIDUS* ePOD/eSERV Functionality

The *CALIDUS* ePOD/eSERV system provides functionality to handle the process of Proof of Delivery/Collection/Service electronically. The system aids this process by providing both a management interface and a client application for use completing tasks. The system supports three job types at this point which encompass the functionality to complete many more tasks with them. At this point the system can be used to complete and record Deliveries, Collections and Services.

The software is broken into the following main areas:

- Admin.
- Mobile device application.
- Import/Export.
- Database.



7.1 Server

The *CALIDUS* ePOD system is hosted on a Windows Server. The minimum configuration is as follows:

- Dual Core 2.0+Ghz processor
- 100Gb Hard Disk Space

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- 2Gb Memory
- Gb Ethernet Network

The recommended configuration differs with the number of users on the system and the quantity of data maintained over time. However, the following is a good medium-sized solution:

- Quad Core 2.0+Ghz processor
- 500Gb 7200+ Hard Disk Space (local SCSI RAID or SAN)
- 4Gb Memory
- Gb Ethernet Network

Required Software:

- Microsoft Windows Server (latest).
- Microsoft IIS (Web Services).
- Remote Support capability (Microsoft RDS over VPN recommended).
- Microsoft .NET Framework 4.8.
- Microsoft SQL Server database.

Note: The Express edition of Microsoft SQL Server can be used for the system, as no enterprise-level components are used. However, there are size and connection limitations of the Express product that may limit the number of users or the amount of data that can be comfortably stored over time. OBS Logistics recommends the Web Server edition, which removes size and connectivity limitations without the full Enterprise level costs or tools.

Optional Software:

- For emails to customers or exporting of data, an email server must be set up and the details provided.
- For bespoke importing from Microsoft Excel, this program must be installed on the server.

Required software configuration:

- Administrative user.
- 1-3 open ports for HTTP/SOAP traffic. More may be required for secure internet connections (HTTPS).
- Internet access (or local file download capability).

7.2 Admin

The *CALIDUS* ePOD administration software is a web-based application that handles all of the administrative side of the *CALIDUS* ePOD system.

The purpose of the application can be broken down into the following sections:

- To create and maintain reference data for the system:
  - **Codes** - used for the exception process when cancelling Jobs or changing collected/delivered items or products and for cross-reference data, for example, DU types, UOMs, etc.
  - **Service Products** - Products used during the Service processes.
  - **Service Activities** - Activities that can take place during a Service
  - **Vehicles** - including Vehicle Check information, last used by, last checked, last location, etc.
  - **Customers** - address information can be stored against customers for reuse, or job addresses maintained ad-hoc.
  - **Vehicle Products** - maintained levels of Van Stock and Site Stock.
- To create and maintain Configuration information for the system:
  - **Sites** - the basic grouping of jobs and loads. Multiple sites can be configured separately on the same system.
  - **Job Groups** - grouping Jobs of similar settings or customer groups together.
  - **Users** - both of the ePOD devices and Admin system itself, including the maintenance of which groups the user has access to view and amend. The Audit trail of communications from a device is also viewable.
  - **Import/Export** - configuration of automatic import and export processes, for 3rd-party configuration. Supports a generic XML interface and many bespoke interfaces through flat-file and FTP transfer. The Audit trail of transactions is also viewable. Please see the details of import and export in a later section.
- To create jobs of all types and group them together onto Loads (worklists), both singly and in bulk.
- To assign loads to users and vehicles.
- To upload data (loads, jobs and standing data) into the system from Excel files.
- To view and edit the jobs and loads created, including sequencing and consolidating jobs.

- To print or email a completion report in the configured style (POD, POC, Service/Work Report).
- To view images taken against jobs/items.
- To see basic user tracking information, if available.
- To view results of vehicle checks and provide resolution information.
- To view vehicle and site product levels.
- Service-specific functionality includes:
    - Service job screen with service-specific search criteria.

The system is built using Microsoft ASP.NET and is hosted on a Microsoft web server running Internet Information Services (IIS), backed by .NET 4.8.

The system is accessed through a standard web browser.

The system requires JavaScript to be allowed in web pages.

The system has been tested on multiple versions of:

- Microsoft Internet Explorer (8 and above).
- Mozilla Firefox (3 and above).
- Google Chrome (and Chromium-based browsers) *recommended.
- Opera.

The system is also confirmed externally as working with Apple Safari.

7.3 Mobile Application

The *CALIDUS* ePOD/eSERV mobile application handles all of the operational functionality for the C-ePOD system.

The system is available on the Android platform (Android version 4.1 and above).

The mobile app allows users to connect and receive load data, consisting of a load (worklist) and a series of associated jobs. It provides the functionality to process and complete these jobs electronically in the field. The mobile application allows processing of services, collections and deliveries. The mobile application is reliant on a network connection either mobile data or Wi-Fi to retrieve load data, but is not reliant on a connection to complete them, as once jobs are complete, data will be stored on the device until the next time the device has a connection and the application is running. Static data (such as site information) is stored locally - this is downloaded once during the login process, if a connection is present and the data requires updating.

Functionality supported includes:

- Logon:
    - Initial configuration.
    - Configuration screen.
    - Status data download (since last logon).
    - Download loads (Worklists).
    - Logon and load processing without connection.
    - Load assign by vehicle/user.
- Configurable vehicle defect checks.
- Barcode scanning (device-dependant).
- Job list (workload):
    - Customisable list on screen.
    - Show all jobs/outstanding jobs only.
    - Show load information.
    - Choose any job (re-sequence).
    - Refresh of current work-list (automatically and on-demand).
        - Show jobs updated/added/removed.
    - Show in progress job.
    - Metrics entry, at start and end of work list.
- Job details:
    - Show information of job:
        - Customer details (job, origin and final destination name and address, contact name, telephone, etc).
        - Instructions (enforced viewing).
        - Planned start/end date and time.
    - Allow call (from job contact information).

        - Allow navigation (software-dependant).
        - Allow SMS (from job contact information).
        - Cancel job.
        - Auto-refresh of job details if available.
        - Resequence checks.
        - Job start and job arrival time capture functionality.
        - Configurable job detail data capture through user-definable forms and fields (UDF).
        - Configurable job arrival data capture through UDF.
        - Configurable pre-job terms and conditions and data capture through UDF.
- Collection/Delivery:
        - Identify delivered items (Pallets, Containers, Products) by several methods:
            - Enter Container (i.e. Pallet, Trolley, Package) ID manually.
            - Scan container (through camera or integrated barcode scanner).
            - Enter by Grid (configurable).
        - Configurable list of container and product details.
        - Popup of further container and product details.
        - Collection/Delivery processing options:
            - Container-only.
            - Container and Product.
            - Loose products.
            - Ad-hoc collection and delivery of containers.
        - Forced positive action against Containers/Products (i.e. must scan, must cancel).
        - Configurable level of errors and warnings.
        - Configurable container and product data capture through UDF.
        - Change product quantity and cancellation of products and containers.
        - Product qty countdown through scanning barcodes.
        - Configurable job arrival data capture through UDF.
- Service:
        - Configurable processes:
            - Activities .
            - Configurable pre- and post-work checks though UDF.
            - Info - configurable key data for that service item, through UDF.
            - Installed/removed products (parts).
            - References entry (e.g. serial number capture, up to 4 with dialogue).
            - Diagnosis entry, plus configurable check box entry (up to 4, dependant on client), plus configurable data capture through UDF.
        - Validation on entered details.
        - Allow saving of details mid-job.
        - Different configurations per job type, product type, through UDF.
- Signature Capture:
        - Configurable customer signature.
        - Configurable engineer/driver signature.
        - Enter signatory.
        - Configurable T&Cs display.
        - Summary of actioned goods.
        - Enter signature and confirm.
        - Claused Delivery.
        - Unmanned delivery.
- Job Completion Photo:
        - Configurable entry of paper document or other job photo.
- Exception:
        - Multiple reason codes (job/detail).
        - Description of exception.
        - Take images, with comments.
        - Qty entry on product exception.
        - Configurable data capture for exceptions through UDF, dependent on reason code.
- General:
        - Orientation change.
        - Scrolling screens.
        - GPS-Tagging.
        - GPS-Tracking.

The mobile application system is written in a variety of languages, in Appcelerator Titanium, for all device configurations.

The mobile device communicates with the main system through web services, hosted by the main server. These web services are written in C#.NET.

7.4 Import/Export

Import of data into the system can be through several mechanisms:

- Web services - the standard interface
- Bespoke manual file upload, through CSV or Microsoft Excel file
- Bespoke automatic file upload, through CSV, XML or Microsoft Excel file

The web services are hosted as part of the main *CALIDUS* ePOD server, are written in Microsoft C#.NET and run as SOAP or HTML Web Services. Data is formatted in a strongly-typed XML file, validated by a full XSD. Data can be passed either as a string or as an XML object.

The data defined in this XSD can be modified by development for customers who require additional data sent to and from the *CALIDUS* ePOD system.

The bespoke automatic and manual file uploads are written on demand for customers who require it.

The standard Web Services import interface supports:

- Loads
- Jobs (stand-alone or within a Load)
    - Collections
    - Deliveries
        - Containers (Pallets, boxes, etc)
        - Products (both within containers and loose products)
    - Services
- Standing Data
    - Users
    - Vehicles
    - Service Products
    - Customers
    - Reason Codes

Export of data from the system can be through several mechanisms:

- Request of data from a Web Service.
- Auto-export of data.

The standard Web Services export interface supports:

- Loads, including all images.
- Jobs, including all images.
- POD/POC/Service reports (for consumers or document management systems).
- *CALIDUS* Portal track and trace application.
- 3rd-party tracking applications (for example, Palletforce, PalletTrack, Fortec, Hazchem, etc).

The system supports many exports, which may be routed to several consumers on job completion, such as:

- Carrier of the job.
- Owner of the job.
- Tracking systems.
- Document management systems.

Web Services are supplied for external systems to request information on loads and jobs, by ID or date since. The web services are hosted as part of the main *CALIDUS* ePOD server, are written in Microsoft C#.NET and run as SOAP or HTML Web Services. Response Data is formatted in a strongly-typed XML file, validated by a full XSD.

Standard requested data to export supports:

- Loads (including all Jobs underneath) by ID or date.
- Jobs by ID or date.
- Current vehicle information.

Auto-export of data can be configured to push the XML data automatically to the client system, via several mechanisms:

- Web service.
- Email.
- Flat-file copy, local, remote or FTP.

If configured as a web service, the auto-export process will connect to the defined web service and push the data to it in the XML format defined above. If configured as an Email address, the XML file will be emailed to the defined address.

This process can also (if configured) automatically produce and email Completion Documents (defined POD, POC or Service reports) to customers, on successful completion of a job.

The Auto-export process supports:

- Automatic emailing of completion reports to customers (if configured).
- Load (header or with all Job information).
- Jobs (Completed or Cancelled) with all details.
- Tracking systems.
- Other OBS Logistics products

The Auto-Export process is run as a scheduled task on the main *CALIDUS* ePOD server and are written in Microsoft C#.NET.

7.5 Database

The *CALIDUS* ePOD database holds:

- Load and Job data for the jobs in progress and completed.
- Captured signature data for completed loads.
- Image data for cancelled or amended lines.
- Image data for document capture.
- Standing Data (configuration and system data).
- Tracking data (location, user and system date and time).

The system uses Microsoft SQL Server 2018.

8 Appendix A: Document References

A.1 References

Ref No	Document Title & ID	Version	Date
1	UG 291094 EPOD Admin User Guide	4.5.00.05	25/04/2019
2	UG 291097 EPOD Client User Guide	4.0.02.21	02/04/2019

A.2 Glossary

Term or Acronym	Meaning
General Definitions	
EPOD	Electronic Proof of Delivery. The OBSL EPOD system is *CALIDUS* ePOD. This also comprises the basis of the Service Completion system *CALIDUS* eServ.
Server	The portion of the *CALIDUS* ePOD/eServ systems that controls all the data and sends information to and receives updates from the mobile device.
Mobile Device; PDA	The device used by the driver to perform the jobs. Typically an Android mobile device or tablet.
Site	The site usually defines the depot, business or the transport group (carrier). It can be set to any value required by the customer. All transactions data (for example, loads and jobs) and standing data (for example, vehicles and uses) belong to a site. An EPOD user, on a device or in the Admin screen, can only see data for one site at a time.
Load	A single journey for the driver with a set of work attached. A load is identified by a unique load ID. This may also be referred to as a worklist or workload.
Job	Also Consignment. A single task for the driver as a specific location. This could be the collection of goods or the delivery of goods. Jobs may also be Services (for example, servicing, installing or de-installing a boiler). A job is identified by a unique job ID but can also have other references held against the job (e.g. job code, SO number, customer reference and external reference).
Job Group	Jobs must be tagged with a Job Group. All jobs tagged with a single job group are processed in the same way. The job group has configuration associated to it to control such items as: POD/POC Report settings; Pre-Job actions (such as signing at a gatehouse); Post-Job actions (such as who signs for the item, are photos required); configurable fields required for entry for the jobs; Terms and Conditions displayed and; driver/user process (such as photos required for cancellation, comments/notes allowed). The job group can be used for any or all Sites, and the configuration against the job group can be different in each site. Job Groups can also be restricted from Admin and Remote users, so that certain users only see jobs for certain groups.
Container	A generic term for any object that contains the items being collected or delivered. Examples of containers are: Pallet; Package; Carton; Item; Cage. A special container "Loose Products" - see Product below. A container is identified by a container ID which is unique to this physical container.
Product	A product is any goods that are being collected or delivered where the product has a 'Product Code' which identifies what the product is but which does not uniquely identify each individual item. A product will also have a quantity associated with it to indicate how many items of this 'Product Code' are being collected or delivered. Products can either be processed within a 'Container' or as 'Loose Products' without a 'Container'.
Owner	The owner of the order that created the job. Typically this is the sales team that took the order and will be responsible for dealing with queries from the customer regarding the status.
Operator; Executor	The Site (depot or carrier) that is executing the load or loads that are involved in the delivery of the items.
Item Related Definitions	
Job Code	A reference associated with a job or job(s). This reference is common to connected jobs, for example this would be the same on both the collection of goods and the associated delivery of the same goods. Typically this would be the transport unique reference.
SO Number	A reference associated with a job which indicates the "Sales Order Number" this job is associated with.
Customer Reference	A reference associated with a job which has been provided by and will be recognised by the customer.
External Reference	

Term or Acronym	Meaning
	A reference associated with a job which does not match any of the existing references, usually because it has been provided by an external system.
Pallet	An alternative for 'Container'. The term pallet is used when the operation only uses portable platforms as the container for goods.
Package	An alternative for 'Container'. The term package is used when the operation only uses boxes or wrapping as containers for goods.
Package Code	A code representing the type of 'Container'.
Package Desc	A description of the type of 'Container'.
Product Code	A code which identifies what a product is.
Item	A generic term for any individual item that can be collected or delivered. An item can represent a 'Container' or a 'Product'. This can also be used as an alternative for 'Container' when the operation only treats the goods as individual items, i.e. not as identifiable products.
Service Item	An item which will be serviced by a service job. See action 'Service'.
Issue Life	The time after which an item is no longer fit for purpose.
Pack Size; Case Quantity	A product may consist of a full quantity of items, inside a pack. The Pack Size (or Case Quantity) defines the amount of this product contained in a single pack. For example, if there are 85 items to deliver, with a pack size of 24, the number of full packs is determined to be 3 (24 * 3, or 72), with the remaining (13) being 'loose' quantity. This is displayed as "3/13" on the mobile application.
UOM; Item Type	Unit of Measure; The major (case) UOM. This can optionally be displayed on the mobile device when changing product quantities.
Product Type	A classification of the product being delivered. For example, a company may deliver 7 different mortar products and 80 different concrete slab products. The Product Types may be set to "MORTAR" and "SLABS". This may be used to attach additional configuration, changing the data required when collecting or delivering these product types.
Status Definitions	
Status	An indicator of how far through the processing a 'Job', 'Container' or 'Product' has progressed.
Pending	A status indicating that the processing has not yet started, but is required to be completed.
In Progress	A status indicating that processing has started but not yet finished.
Complete	A status indicating that the 'Job', 'Container' or 'Product' has been collected or delivered.
Complete (Amended)	A status indicating that the 'Job', 'Container' or 'Product' has been collected or delivered but that some changes or amendments have been made. This means that not everything that was planned to be collected or delivered was collected or delivered, some items may have been cancelled or some products may only have had some of the planned quantities collected or delivered.
Complete (Claused)	A status indicating that the processing has been finished but that a 'Clause' condition has been recorded for this item.
Claused	See 'Complete (Claused)' and action 'Clause'.
Cancelled	A status indicating that the processing of this item or job is no longer required.
Cancelled at Collection	A status indicating that the delivery of a container or product is no longer required because the associated collection of this container or product was cancelled.
Submitted	An optional status that applies only to a 'Job' and which occurs after the 'Job' has been completed. This indicates that any time and expenses information recorded for the 'Job' has been submitted back to the server and can no longer be altered.
Action Definitions	
Start	An action associated with a 'Job' meaning the driver is about to start the processing of this job or jobs. This action will mark the job(s) with a status of 'In Progress'.
Arrive	A conditional action associated with a 'Job' meaning the driver has arrived at the location the goods should be collected from or delivered to.
Continue	An action associated with a 'Job' meaning the driver has previously performed the 'Start' and/or 'Arrive' action and has exited the processing screen but is now going to continue the processing.
Collect	An action associated with a specific 'Container' or a 'Product' meaning the driver has collected the 'Container' or 'Product'. This action will mark the 'Container' or 'Product' with a status of 'Complete' or 'Complete (Amended)'.
Collect Claused	An action associated with a specific 'Container' or a 'Product' meaning the driver has collected the 'Container' or 'Product' but with a condition under which the collection was accepted. This action will accept the clause condition and then mark the 'Container' or 'Product' with a status of 'Complete (Claused)'.

Term or Acronym	Meaning
Deliver	An action associated with a specific 'Container' or a 'Product' meaning the driver has delivered the 'Container' or 'Product'. This action will mark the 'Container' or 'Product' with a status of 'Complete' or 'Complete (Amended)'.
Deliver Claused	An action associated with a specific 'Container' or a 'Product' meaning the driver has delivered the 'Container' or 'Product' but with a condition under which the delivery was accepted. This action will accept the clause condition and then mark the 'Container' or 'Product' with a status of 'Complete (Claused)'.
Clause	An action associated with a specific 'Container' or a 'Product' that has already been collected or delivered meaning the collection or delivery has been accepted with a condition. This action will accept the clause condition and then mark the 'Container' or 'Product' with a status of 'Complete (Claused)'.
Cancel	An action associated with a 'Job', 'Container' or 'Product' meaning the collection or delivery will not be performed for this 'Job', 'Container' or 'Product'.
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T&Cs	Terms and Conditions. The T&Cs are shown when signatures are prompted for. The text of the T&Cs are defined in the system itself.
Transfer Load	A load select from which to swap jobs to the user's load.
Base	E.g. 'Return to Base'. Typically the depot from which the driver departed.
Unplanned Ad Hoc Collection	A collection job that is created by the driver, usually after delivering to a customer.
Ad Hoc Container Entry/Scanning	The process of adding containers (items) to a job that have not been pre-advised on the job.
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GPS	

Term or Acronym	Meaning
	Global Positioning System; the satellite system used to obtain a GPS position, for use with navigation and location positioning.
Geocode; Reverse Geocode	Geocoding is the process of obtaining lat-longs from an address. Reverse Geocoding is the process obtaining an address from lat-longs.
Geofence; Geofence Break	A Geofence is a perimeter around a location. A Geofence Break occurs when a device passes through this perimeter on entry or exit from the location.

A.3 Authorised By

Murray Middleton	OBS Consultant	_____
Tony Walker	OBS Consultant	_____

9 Functional Overview

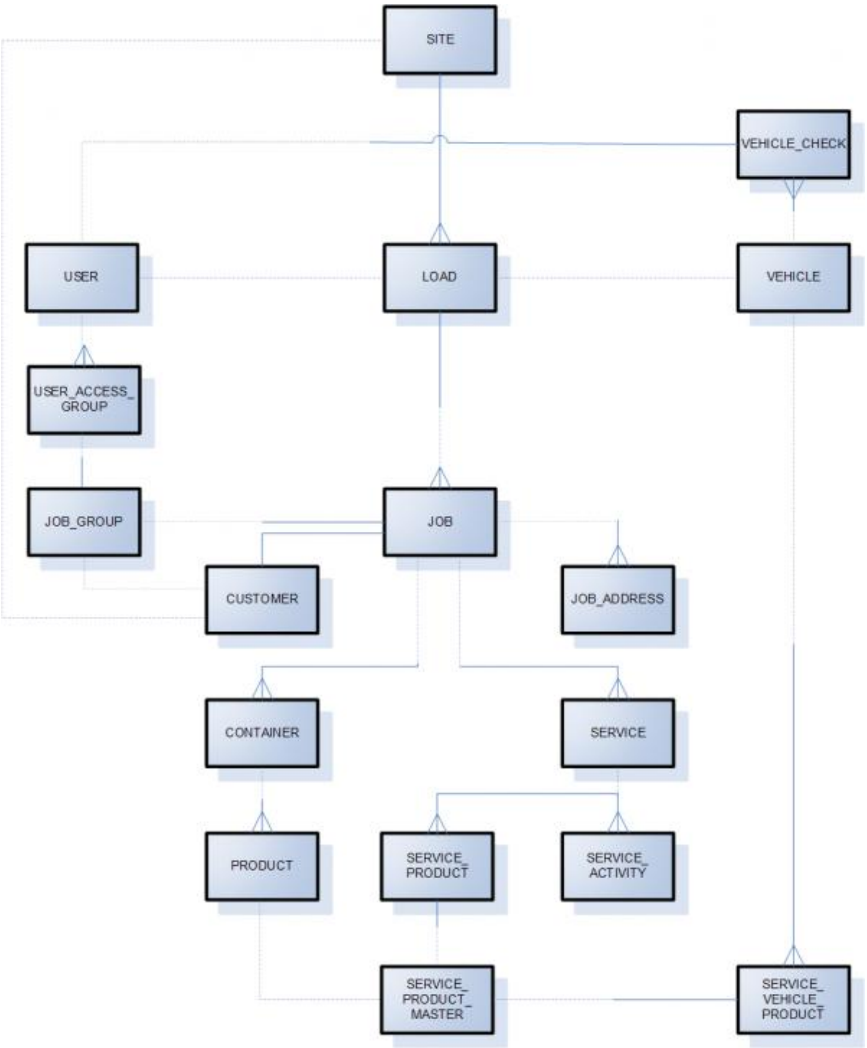
The document is intended to describe the basic requirements for interfacing to and from the *CALIDUS* ePOD system, with respect to the main *CALIDUS* ePOD tables.

9.1 Solution Overview

CALIDUS ePOD provides an electronic proof of delivery execution layer to existing TMS systems or a stand-alone execution and basic Admin layer for stand-alone customers.

For those customers who require an interface into and out of *CALIDUS* ePOD, a standard interface format is defined here.

The layout of the *CALIDUS* ePOD system is as follows:



Most of the tables in the structure can be configured through the interface with the following exceptions:

- Job Group - this can be created automatically as part of the job interface. However, the job group within the site will then need to be configured.
- User Access Group - users' access to jobs will be automatically created when job groups are created.
- Service Vehicle Product.
- Service Activity.

As can be seen, the basic structure is:

Ready for What's Next, Now™

- Load - a collection of jobs of any type to be completed by the PDA user.
- Job - a specific task for a customer (i.e. collect order A from point X at this time, deliver order A to point Y at this time).
- Container - any unique item to be delivered, for example, bar-coded pallets, cartons, packages, trolleys, A-frames, etc.
- Product - any product to be delivered, plus a quantity. Can be contained within the containers, or can be Loose products.

Note:

- Each Load or Work List will be assigned to a user for completion. Many can be created and assigned to users - only the earliest will be active.
- Each job will be listed in sequence, or planned start time. It is configurable whether the user is forced to complete tasks in sequence.
- Each container and product must be actioned by the user (i.e. enter/scan each container for delivery, or say why each container was not delivered).
- If a container has products, each of these must be actioned by the user. It is configurable whether products are required to be entered.
- If products are defined without a container (i.e. Loose Products), they must be entered. *CALIDUS* ePOD assumes a Loose Product container of '000000000000000', so that the table data structure is preserved.

9.2 Scope

Note: All web service requests and XML formats are fully documented in the supporting documentation. XML files have associated XSDs, for appropriate validation.

Note: There are interfaces into *CALIDUS* ePOD for Standing Data. This document does not yet show these interfaces, as this can be maintained separately and manually within *CALIDUS* ePOD. Those flows are:

- Vehicles
- Reason Codes (used when cancelling jobs or pallets)
- Users (Drivers/Engineers)
- Customers

Interfaces do exist for this standing data upload through the Web Services, used in exactly the same way as described for the Load and Job interfaces below. The interface formats are described in detail in the supporting documentation, referenced in the appendices.

The system can be configured to automatically create the Job Groups, Vehicles and Users with very basic information based off the received values in the Load and Job messages. Customers will be created as part of the information received through the Job messages.

Note: The document does not at this time define the interface required for Service-type jobs, as this is currently in significant development within the product. A basic interface does exist and is described in detail in the supporting documentation, referenced in the appendices.

10 Functional Description

Import of data into the system can be through several mechanisms:

- Web Services standard interface
- Bespoke manual file upload, through CSV or Microsoft Excel file
- Bespoke automatic file upload, through CSV, XML or Microsoft Excel file

The Web Services are hosted as part of the main *CALIDUS* ePOD server and run as SOAP or HTML Web Services. Data is formatted in a strongly-typed XML file, validated by a full XSD. Data can be passed either as a string or as an XML object.

The data defined in this XSD can be modified by development for customers who require additional data sent to and from the *CALIDUS* ePOD system.

The Bespoke automatic and manual file uploads are written on demand for customers who require it.

The standard Web Services import interface supports:

- Loads
- Jobs (stand-alone or within a Load)
    - Collections
    - Deliveries
        - Containers (Pallets, boxes, etc)
        - Products (both within containers and loose products)
    - Services
- Standing Data
    - Users
    - Vehicles
    - Service Products
    - Customers
    - Reason Codes

Import files can contain any or all of these import elements.

Export of data from the system can be through several mechanisms:

- Request of data from a Web Service
- Auto-export of data
- Palletforce Extract

Web Services are supplied for external systems to request information on Loads and Jobs, by ID or Date Since. The Web Services are hosted as part of the main *CALIDUS* ePOD server and run as SOAP or HTML Web Services. Response Data is formatted in a strongly-typed XML file, validated by a full XSD.

Standard requested data to export supports:

- Loads (including all Jobs underneath) by ID or Date
- Jobs by ID or Date
- Current Vehicle information

Auto-export of data can be configured to push the XML data automatically to the client system, via several mechanisms:

- Web Service (SOAP or POST/REST)
- Email
- Flat-file copy, local, remote or FTP

If configured as a Web Service, the Auto-Export process will connect to the defined web service and push the data to it in the XML format defined above. If configured as an Email address, the XML file will be emailed to the defined address.

This process can also (if configured) automatically produce and email Completion Documents (defined POD, POC or Service reports) to customers, on successful completion of a job.

The Auto-export process supports:

- Automatic emailing of Completion reports to customers (if configured).
- Load (header or with all Job information).
- Jobs (Completed or Cancelled) with all details.
- Pallet Network Tracking systems, including:
    - Palletforce.
    - Pallex.
    - TPN.
    - Hazchem.
    - Palletline.
- OEM bespoke interfaces.
- Other OBS Logistics products, including:
    - *CALIDUS* TMS.
    - *CALIDUS* Portal TTM.

The Auto-Export process is run as a scheduled task on the main *CALIDUS* ePOD server.

10.1 Import Message Content

A basic list of fields that may be used in the interface for the Load (Manifest) and the Job follows. A full spreadsheet of all the import flows and fields containing all the limitations on length and defaulted values is provided separately.

Note: You can configure the system to create standing data as part of the load and jobs import. Alternatively, you can create the standing data through the import process for the following elements:

- Users.
- Vehicles.
- Service Products.
- Customers.
- Reason Codes.

These imports are straightforward and follow the guidelines that are laid out in this document. The allowable fields are in the spreadsheet, and many examples exist to view how these might work and will be provided to you with this documentation. These imports are not covered in this guide.

Note: The content of the imported data varies and expands as the *CALIDUS* ePOD product expands. As new items are added to the application, the spreadsheet will be modified and issued to you, to aid in any mapping of data into the application. The Import Spreadsheet is referenced in Appendix A.

EPOD_LOAD

Name	Description
EPL_SITE_ID	EPL_SITE_ID: Unique reference of the site that the Load belongs to.
EPL_LOAD_ID	EPL_LOAD_ID: Unique reference of the Load.
EPL_DELETE_LOAD	If "Y", the specified load will be deleted from *CALIDUS* ePOD.
EPL_LOAD_START_PLANNED_DATE	Load Duration.
EPL_LOAD_START_PLANNED_TIME	Load Duration.
EPL_LOAD_END_PLANNED_DATE	Load Duration.
EPL_LOAD_END_PLANNED_TIME	Load Duration.
EPL_LOAD_DISTANCE_PLANNED	For Information Only.
EPL_VEHICLE_ID	To be used if a vehicle is predefined as assigned to complete this load.
EPL_USER_ID	To be used if a user is predefined as assigned to complete this load. Loads are automatically allocated to users in the following way: • Site, User and Vehicle match, earliest selected. • Site and User match, vehicle is blank, earliest selected. • Site and Vehicle match, user is blank, earliest selected.

Name	Description
	Once allocated to a user, the load is stamped with the driver and vehicle set when the load is requested. It is recommended to NOT mix modes above, as this can lead to unpredictable results.
EPL_TRAILER_ID	EPL_TRAILER_ID: Trailer Number. To be used if the vehicle being used to fulfil the load is a Tractor unit.
EPL_LOAD_INFORMATION	To be populated with any information to be displayed to the user regarding the Load.
EPL_TIMEZONE	To be populated with the timezone for the load in Olsen ID format.
EPL_STATUS	Can be used to cancel the Load. If used, set the status to "X".
EPL_ROUTE_CODE	Route identifier against the trip.
EPOD_JOBS	EPOD_JOBS contains a series of EPOD_JOB objects. In standard operation, ALL jobs on a load must be refreshed if any are being changed. Any jobs that are omitted under a load will be deleted. If a single job is to be updated, this single change may be interfaced using the EPOD_JOBS top-level tag, rather than this tag embedded under the load.

EPOD_JOB

Name	Description
EPL_SITE_ID	Unique Reference for the Site that the Job belongs to.
EPL_LOAD_ID	Unique Reference for the Load that the Job belongs to. If not provided, defaulted from the enclosing EPOD_LOAD.
EPL_JOB_ID	Unique reference for the job. **Warning**: DO NOT PROVIDE THIS TAG - this will be generated by C-ePOD.
EPL_JOB_CODE	External reference for the Job. This element can be used to link a collection and delivery together under the same reference. So, if an order is being collected at A and delivered at B, there are 2 jobs, each with a unique Job ID, but with the same Job Code. Optionally, C-ePOD will keep the Delivery leg of a linked job updated with the information captured from the collection.
EPL_JOB_TYPE	"D"-Delivery, "C"-Collection, "S"-Service.
EPL_JOB_GROUP	This is setup within the Admin system. Each job group has its own settings and will determine how the Job is processed dependant on these settings.
EPL_CUST_REF	Customer's Order Reference.
EPL_JOB_INSTRUCTION	Free text that will be shown to the driver on the mobile device.
EPL_OFFICE_INSTRUCTION	Free text that will *not* be shown on the mobile device, but will be visible within the Admin system.
EPL_START_PLANNED_DATE	Collection/Delivery Window.
EPL_START_PLANNED_TIME	Collection/Delivery Window.
EPL_END_PLANNED_DATE	Collection/Delivery Window.
EPL_END_PLANNED_TIME	Collection/Delivery Window.
EPL_DISTANCE_PLANNED	Planned distance. Can be used to compare Planned vs Actuals if the system is configured for telematics update from an external system. Otherwise for information only.
EPOD_CUSTOMER	This tag may be used to specify a Customer separately. If this is used, and the address and contact information on the job below is different, the EPOD system will create a Job Address specifically for this job, whilst maintaining the Customer information separately, as an Invoice address. Note that this will happen if the Customer has been created previously either through another Job, another Customer Tag in a Job or a Customer Tag alone.
EPL_CUSTOMER_CODE	Customer Code from external system. If not provided, one will be generated from EPL_CUSTOMER_NAME
EPL_CUSTOMER_NAME	The Name of the customer
EPL_ADDRESS_1	
EPL_ADDRESS_2	
EPL_ADDRESS_3	

Name	Description
EPL_ADDRESS_4	
EPL_ADDRESS_5	
EPL_POSTCODE	
EPL_CONTACT	Contact on site for the job. Can be changed at Job completion.
EPL_TELEPHONE	The Customer's Contact Telephone number
EPL_EMAIL	Contact Email address. Can be used to automatically send Job Completion documents to the customer.
EPL_SO_NUMBER	Sales Order Reference.
EPL_EXT_REF	An external ref to be stored, reported and returned only.
EPL_ORDER_DATE	Date Order created - defaulted to Now()
EPL_SALES_CONTACT	The operative who took the order. Can be used as a display field for documentation
EPL_SERVICE_LEVEL	
EPL_JOB_STATUS	A user-enterable Job Status, to help identify further processing back in the admin system, specifically to reschedule another service if this job is incomplete.
EPL_USER_ID	To be used if a user is pre-assigned to complete this job. Only for Services without a LOAD.
EPL_COL_DATE	Date Order Collected. Can be used for any date field
EPL_SEQUENCE	The sequence in which the jobs are to be completed. If this is not provided, the system will allocate the jobs in the sequence in which they were provided in this interface i.e. first is ""0001"", second is ""0002"", etc. If Delivery and Collection jobs are specified with the same sequence, the delivery job is completed first.
EPL_LINKED_ID	An identifier that informs the system that this job should be linked (consolidated) with other jobs. The format is irrelevant - if multiple jobs on the same load have the same link ID, they will be consolidated. Link only jobs on the same load with the same job type.
EPL_UDF_JOBDETS	EPL_UDF_JOBDETS: To be used to specify user definable fields (UDF) against job details
EPOD_JOB_ADDRESS	Any Job address against the job, if different to the customer address or address on the job. Typically, this is used to provide additional addresses on a job, so that the driver can view them. For example, providing a Final Delivery address when picking up a parcel, or providing the origin address when delivering a parcel. Consisting of the following tags if present:
EPL_ADDRESS_TYPE	"D" - Delivery Address, "C" - Collection Address, "O" - Original Collection Address, "F" - Final Delivery Address.
EPL_NAME	
EPL_ADDRESS_1	
EPL_ADDRESS_2	
EPL_ADDRESS_3	
EPL_ADDRESS_4	
EPL_ADDRESS_5	
EPL_POSTCODE	
EPL_CONTACT	
EPL_TELEPHONE	
EPL_EMAIL	
EPL_LAT	The Latitude in degrees
EPL_LONG	The Longitude in degrees
EPL_OWNER_NAME	Can be used as a display field for documentation
EPL_TRAILER_ID	To be used if the vehicle being used to fulfil the job is a Tractor unit, and requires a trailer ID. This can be left blank to have this entered by the driver on demand.
EPL_TIMEZONE	To be populated with the timezone for the job.
EPL_LOADING_TYPE	Controls whether this job is seen to be a Loading task at a depot (Job Type = "C") or unloading at a depot (Job Type = "D"). Values can be "L" or "U" or ""
EPL_SWAP_VEHICLE	Indicates whether the job is a vehicle swap (i.e. requires no item-related action in C-EPOD)

Name	Description
EPL_ACCOUNT	
EPL_ORDER_TIME	Time Order created - defaulted to the time that the job was received.
EPL_EXPIRY_DATE	
EPL_EXPIRY_TIME	
EPL_PF_DEPOT	For Pallet Networks: The Depot
EPL_PF_TRACKING_NO	For Pallet Networks: The Tracking Number
EPL_TRAVEL_PLANNED	Planned travel time in minutes
EPL_WORK_PLANNED	Planned work time in minutes
EPOD_TIME_WINDOWS	
EPOD_TIME_WINDOW	This defines the arrival time window.
ETW_TIME_START	The Start window time, in HHMMNNSS format.
ETW_TIME_END	The End window time, in HHMMNNSS format.
EPL_LAT	The Latitude in degrees
EPL_LONG	The Longitude in degrees
EPOD_CONTAINERS	Contains a series of EPOD_CONTAINER objects
EPOD_PRODUCTS	Contains a series of EPOD_PRODUCT objects (Loose Products)
EPOD_SERVICES	Contains a series of EPOD_SERVICE objects

EPOD_CONTAINER

Name	Description
EPL_SITE_ID	
EPL_JOB_ID	Not In Use
EPL_CONTAINER_ID	The unique identifier for a container. Note that this is the value that will be compared to the scanned barcode. If this is different to a visible container number, this should be provided in one of the other tags on this record, for example, CODE_1/2/3.
EPL_SEQUENCE	The sequence in which the containers should be unloaded. This should be numeric, i.e. "1", "0004", etc.
EPL_CONTAINER_PACKAGE_CODE	Container Type Code
EPL_CONTAINER_PACKAGE_DESC	Container Type Description
EPL_GROSS_WEIGHT	Gross weight of the container
EPL_CODE_1	Additional code field used for any purpose
EPL_CODE_2	Additional code field used for any purpose
EPL_CODE_3	Additional code field used for any purpose
EPL_DESCRIPTION_LONG	Long description of the container
EPL_FLAGS	EPL_FLAGS contains flags used to indicate hazardous, gel, ice, radioactive etc - it is not used in EPOD, but is stored for reporting purposes. Content is XML with it's own configurable XSD
EPL_VALID_DATE	The date up until the contents of the package are valid - controls warnings at delivery.
EPL_VALID_TIME	The time up until the contents of the package are valid - controls warnings at delivery.
EPL_CONTAINER_ONLY	Controls whether a container with products inside it has the contents scanned at initial unloading. This is controlled at a job group level, but may be over-ridden per container, to support bulk consolidated pallets, mixed product in totes, etc. Multiple values: • If omitted or blank - behaviour inherited from the job group • "Y" - contents are never scanned on initial unloading • "N" - contents are always scanned on initial unloading
EPOD_PRODUCTS	EPOD_PRODUCTS contains a series of EPOD_PRODUCT objects associated to the container.

EPOD_PRODUCT

Name	Description
EPL_SITE_ID	
EPL_JOB_ID	Not In Use
EPL_CONTAINER_ID	Not In Use
EPL_PRODUCT_CODE	Product Code
EPL_SEQUENCE	Sequence for display on device and screens. This should be in numeric format e.g. "1", "0004", etc.
EPL_CUST_REF	For display on device
EPL_DESCRIPTION	Product Description
EPL_PRODUCT_QTY_PLANNED	Planned collection/delivery quantity
EPL_PRODUCT_QTY_ORDERED	Ordered product quantity, if required. For display on POD, if required
EPL_ITEM_TYPE	Product Item Type (DU or Category), for display on device and POD, if required.
EPL_UNIT_TYPE	Product Unit Type (UOM), for display on device and POD, if required.
EPL_DESCRIPTION_LONG	Long Product Description
EPL_PRODUCT_WEIGHT	Weight
EPL_UNIT_PRICE	Nett price per unit. Note: Do not provide this or Unit VAT if a priced POD is not required. If provided, and the POD format configured for this job supports price, the system will display the Price columns and Totals of Price and VAT. If not provided, the default value 0 will be used to calculate the totals.
EPL_UNIT_VAT	VAT per unit.

Note:

- The jobs should be sent through in the order in which they should be completed. The Sequence field should be sent with a numeric padded value as described in the description.
- Loads and the contained jobs will be sent as one message. Multiple loads can be built into one XML message structure.
- XSDs for validating the XML structure will be provided.

A sample of a single load with multiple jobs of many types are shown below - a brief description of the job type is shown in the office instructions:

```
<EPOD_IMPORT EPL_SITE_ID="TEST" EPL_USER_ID="ADM" EPL_USER_PASSWORD="TEST">
  <EPOD_LOADS>
    <EPOD_LOAD>
      <EPL_SITE_ID>TEST</EPL_SITE_ID>
      <EPL_LOAD_ID>TEST001</EPL_LOAD_ID>
      <EPL_LOAD_START_PLANNED_DATE>20120320</EPL_LOAD_START_PLANNED_DATE>
      <EPL_LOAD_START_PLANNED_TIME>16450000</EPL_LOAD_START_PLANNED_TIME>
      <EPL_LOAD_END_PLANNED_DATE>20120320</EPL_LOAD_END_PLANNED_DATE>
      <EPL_LOAD_END_PLANNED_TIME>16590000</EPL_LOAD_END_PLANNED_TIME>
      <EPL_LOAD_DISTANCE_PLANNED>212</EPL_LOAD_DISTANCE_PLANNED>
      <EPL_USER_ID></EPL_USER_ID>
      <EPOD_JOBS>
        <EPOD_JOB>
          <EPL_SITE_ID>TEST</EPL_SITE_ID>
          <EPL_LOAD_ID>TEST001</EPL_LOAD_ID>
          <EPL_JOB_ID>TEST001001</EPL_JOB_ID>
          <EPL_JOB_CODE>TEST001001</EPL_JOB_CODE>
          <EPL_JOB_TYPE>C</EPL_JOB_TYPE>
          <EPL_JOB_GROUP>JG01</EPL_JOB_GROUP>
          <EPL_CUST_REF>CR-TEST001001</EPL_CUST_REF>
          <EPL_JOB_INSTRUCTION>Free Text Instructions</EPL_JOB_INSTRUCTION>
          <EPL_OFFICE_INSTRUCTION>Multiple container collection with multiple products.
          </EPL_OFFICE_INSTRUCTION>
          <EPL_START_PLANNED_DATE>20120320</EPL_START_PLANNED_DATE>
          <EPL_START_PLANNED_TIME>00000000</EPL_START_PLANNED_TIME>
          <EPL_END_PLANNED_DATE>20120320</EPL_END_PLANNED_DATE>
          <EPL_END_PLANNED_TIME>00000000</EPL_END_PLANNED_TIME>
          <EPL_DISTANCE_PLANNED>212</EPL_DISTANCE_PLANNED>
          <EPOD_CUSTOMER>
            <EPL_CUSTOMER_CODE>Cust001</EPL_CUSTOMER_CODE>
            <EPL_CUSTOMER_NAME>Customer Jones</EPL_CUSTOMER_NAME>
            <EPL_ADDRESS_1>15 TEST ROAD</EPL_ADDRESS_1>
            <EPL_ADDRESS_2>TESTINGTON</EPL_ADDRESS_2>
            <EPL_ADDRESS_3>TEST</EPL_ADDRESS_3>
            <EPL_ADDRESS_4>TESTside</EPL_ADDRESS_4>
            <EPL_POSTCODE>CH62 9GR</EPL_POSTCODE>
            <EPL_CONTACT>TESTER Jones</EPL_CONTACT>
```

```
  <EPL_TELEPHONE>08458795846</EPL_TELEPHONE>
  <EPL_EMAIL>calidus.epod@obs-logistics.com</EPL_EMAIL>
</EPOD_CUSTOMER>
 <EPL_CUSTOMER_CODE>Cust001</EPL_CUSTOMER_CODE>
 <EPL_CUSTOMER_NAME>Customer Jones</EPL_CUSTOMER_NAME>
<EPL_ADDRESS_1>16 Speke Boulevard</EPL_ADDRESS_1>
<EPL_ADDRESS_2>Speke</EPL_ADDRESS_2>
<EPL_ADDRESS_3>Liverpool</EPL_ADDRESS_3>
<EPL_ADDRESS_4>United Kingdom</EPL_ADDRESS_4>
<EPL_POSTCODE>CH62 9GR</EPL_POSTCODE>
<EPL_CONTACT>TESTER Jones</EPL_CONTACT>
<EPL_TELEPHONE>08458795846</EPL_TELEPHONE>
<EPL_EMAIL>calidus.epod@obs-logistics.com</EPL_EMAIL>
<EPL_SO_NUMBER>SO-LOAD 46</EPL_SO_NUMBER>
<EPL_ORDER_DATE>20120319</EPL_ORDER_DATE>
<EPL_SALES_CONTACT>Jenny</EPL_SALES_CONTACT>
<EPOD_CONTAINERS>
  <EPOD_CONTAINER>
    <EPL_SITE_ID>TEST</EPL_SITE_ID>
    <EPL_JOB_ID>TEST001001</EPL_JOB_ID>
    <EPL_CONTAINER_ID>TEST001001-01</EPL_CONTAINER_ID>
    <EPL_SEQUENCE>0001</EPL_SEQUENCE>
    <EPL_CONTAINER_PACKAGE_CODE>XX00</EPL_CONTAINER_PACKAGE_CODE>
    <EPL_CONTAINER_PACKAGE_DESC>Test Container</EPL_CONTAINER_PACKAGE_DESC>
    <EPL_GROSS_WEIGHT>100.14</EPL_GROSS_WEIGHT>
    <EPL_DESCRIPTION_LONG>1 PLT 800</EPL_DESCRIPTION_LONG>
    <EPOD_PRODUCTS>
      <EPOD_PRODUCT>
        <EPL_SITE_ID>TEST</EPL_SITE_ID>
        <EPL_JOB_ID>TEST001001</EPL_JOB_ID>
        <EPL_CONTAINER_ID>TEST001001-01</EPL_CONTAINER_ID>
        <EPL_PRODUCT_CODE>TESTPROD1</EPL_PRODUCT_CODE>
        <EPL_SEQUENCE>0001</EPL_SEQUENCE>
        <EPL_DESCRIPTION>TEST ITEM</EPL_DESCRIPTION>
        <EPL_PRODUCT_QTY_PLANNED>1</EPL_PRODUCT_QTY_PLANNED>
        <EPL_PRODUCT_QTY_ORDERED>1</EPL_PRODUCT_QTY_ORDERED>
        <EPL_ITEM_TYPE>X</EPL_ITEM_TYPE>
        <EPL_UNIT_TYPE>X</EPL_UNIT_TYPE>
        <EPL_DESCRIPTION_LONG>Long Description</EPL_DESCRIPTION_LONG>
        <EPL_PRODUCT_WEIGHT>12.3</EPL_PRODUCT_WEIGHT>
      </EPOD_PRODUCT>
      <EPOD_PRODUCT>
        <EPL_SITE_ID>TEST</EPL_SITE_ID>
        <EPL_JOB_ID>TEST001001</EPL_JOB_ID>
        <EPL_CONTAINER_ID>TEST001001-01</EPL_CONTAINER_ID>
        <EPL_PRODUCT_CODE>TESTPROD2</EPL_PRODUCT_CODE>
        <EPL_SEQUENCE>0001</EPL_SEQUENCE>
        <EPL_DESCRIPTION>TEST ITEM</EPL_DESCRIPTION>
        <EPL_PRODUCT_QTY_PLANNED>12</EPL_PRODUCT_QTY_PLANNED>
        <EPL_PRODUCT_QTY_ORDERED>1</EPL_PRODUCT_QTY_ORDERED>
        <EPL_ITEM_TYPE>X</EPL_ITEM_TYPE>
        <EPL_UNIT_TYPE>Y</EPL_UNIT_TYPE>
        <EPL_DESCRIPTION_LONG>Long Description 2</EPL_DESCRIPTION_LONG>
        <EPL_PRODUCT_WEIGHT>4.56</EPL_PRODUCT_WEIGHT>
      </EPOD_PRODUCT>
    </EPOD_PRODUCTS>
  </EPOD_CONTAINER>
  <EPOD_CONTAINER>
    <EPL_SITE_ID>TEST</EPL_SITE_ID>
    <EPL_JOB_ID>TEST001001</EPL_JOB_ID>
    <EPL_CONTAINER_ID>TEST001001-02</EPL_CONTAINER_ID>
    <EPL_SEQUENCE>0001</EPL_SEQUENCE>
    <EPL_CONTAINER_PACKAGE_CODE>XX00</EPL_CONTAINER_PACKAGE_CODE>
    <EPL_CONTAINER_PACKAGE_DESC>Test Container</EPL_CONTAINER_PACKAGE_DESC>
    <EPL_GROSS_WEIGHT>100.14</EPL_GROSS_WEIGHT>
    <EPL_DESCRIPTION_LONG>1 PLT 800</EPL_DESCRIPTION_LONG>
    <EPOD_PRODUCTS>
      <EPOD_PRODUCT>
        <EPL_SITE_ID>TEST</EPL_SITE_ID>
        <EPL_JOB_ID>TEST001001</EPL_JOB_ID>
        <EPL_CONTAINER_ID>TEST001001-02</EPL_CONTAINER_ID>
        <EPL_PRODUCT_CODE>TESTPROD1</EPL_PRODUCT_CODE>
        <EPL_SEQUENCE>0001</EPL_SEQUENCE>
        <EPL_DESCRIPTION>TEST ITEM</EPL_DESCRIPTION>
        <EPL_PRODUCT_QTY_PLANNED>1</EPL_PRODUCT_QTY_PLANNED>
        <EPL_PRODUCT_QTY_ORDERED>1</EPL_PRODUCT_QTY_ORDERED>
        <EPL_ITEM_TYPE>X</EPL_ITEM_TYPE>
        <EPL_UNIT_TYPE>X</EPL_UNIT_TYPE>
```

```
            <EPL_DESCRIPTION_LONG>Long Description</EPL_DESCRIPTION_LONG>
            <EPL_PRODUCT_WEIGHT>12.3</EPL_PRODUCT_WEIGHT>
          </EPOD_PRODUCT>
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        <EPL_EMAIL>calidus.epod@obs-logistics.com</EPL_EMAIL>
        <EPL_SO_NUMBER>SO-LOAD 46</EPL_SO_NUMBER>
        <EPL_ORDER_DATE>20120319</EPL_ORDER_DATE>
        <EPL_SALES_CONTACT>Jenny</EPL_SALES_CONTACT>
        <EPOD_SERVICE>
          <EPL_SITE_ID>TEST</EPL_SITE_ID>
          <EPL_JOB_ID>TEST001004</EPL_JOB_ID>
          <EPL_SERVICE_ID>SID-TEST001004</EPL_SERVICE_ID>
          <EPL_SERVICE_TYPE>I</EPL_SERVICE_TYPE>
          <EPL_REG_NUMBER>X502ACB</EPL_REG_NUMBER>
          <EPL_VIN_NUMBER>X502ACB</EPL_VIN_NUMBER>
          <EPL_SIM_NUMBER>X502ACB</EPL_SIM_NUMBER>
        </EPOD_SERVICE>
      </EPOD_JOB>
    </EPOD_JOBS>
  </EPOD_LOAD>
</EPOD_LOADS>
```

```
</EPOD_IMPORT>
```

Note: The content of the imported data varies and expands as the the *CALIDUS* ePOD product expands. As new items are added to the application, the Import XSD will be modified and issued to you, for informational purposes. The Import XML Schema is referenced in Appendix A.

10.2 Mechanism for Sending Import Files to Web Services

The system provides web services for importing and exporting data.

There are two mechanisms:

- Passing the data as a string, through Web Service EPOD_dataservice.asmx
- Passing the data as an XML object, through EPOD_dataservice2.asmx

You will be provided a URL to your system implementation - the access to this will be whitelisted and secured through HTTPS.

The WSDL for the web services can be found by appending "?wsdl" to the end of the provided web service URL.

For each data service, data can be sent via multiple methods, as shown below:

- **EPOD_dataservice.asmx**

SOAP 1.1

The following is a sample SOAP 1.1 request and response. The place-holders shown need to be replaced with actual values.

```
POST /webservices/dataservice/EPOD_dataservice.asmx HTTP/1.1
Host: www.calidus-web.com
Content-Type: text/xml; charset=utf-8
Content-Length: length
SOAPAction: "ePOD_DataService/EPOD_XML_IMPORT"

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <EPOD_XML_IMPORT xmlns="ePOD_DataService">
      <IMPORT>string</IMPORT>
    </EPOD_XML_IMPORT>
  </soap:Body>
</soap:Envelope>

HTTP/1.1 200 OK
Content-Type: text/xml; charset=utf-8
Content-Length: length

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <EPOD_XML_IMPORTResponse xmlns="ePOD_DataService">
      <EPOD_XML_IMPORTResult>string</EPOD_XML_IMPORTResult>
    </EPOD_XML_IMPORTResponse>
  </soap:Body>
</soap:Envelope>
```

SOAP 1.2

The following is a sample SOAP 1.2 request and response. The placeholders shown need to be replaced with actual values.

```
POST /webservices/dataservice/EPOD_dataservice.asmx HTTP/1.1
```

```
Host: www.calidus-web.com
Content-Type: application/soap+xml; charset=utf-8
Content-Length: length

<?xml version="1.0" encoding="utf-8"?>
<soap12:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:soap12="http://www.w3.org/2003/05/soap-envelope">
  <soap12:Body>
    <EPOD_XML_IMPORT xmlns="ePOD_DataService">
      <IMPORT>string</IMPORT>
    </EPOD_XML_IMPORT>
  </soap12:Body>
</soap12:Envelope>

HTTP/1.1 200 OK
Content-Type: application/soap+xml; charset=utf-8
Content-Length: length

<?xml version="1.0" encoding="utf-8"?>
<soap12:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:soap12="http://www.w3.org/2003/05/soap-envelope">
  <soap12:Body>
    <EPOD_XML_IMPORTResponse xmlns="ePOD_DataService">
      <EPOD_XML_IMPORTResult>string</EPOD_XML_IMPORTResult>
    </EPOD_XML_IMPORTResponse>
  </soap12:Body>
</soap12:Envelope>
```

HTTP GET

The following is a sample HTTP GET request and response. The placeholders shown need to be replaced with actual values.

```
GET /webservices/dataservice/EPOD_dataservice.asmx/EPOD_XML_IMPORT?IMPORT=string HTTP/1.1
Host: www.calidus-web.com

HTTP/1.1 200 OK
Content-Type: text/xml; charset=utf-8
Content-Length: length

<?xml version="1.0" encoding="utf-8"?>
<string xmlns="ePOD_DataService">string</string>
```

HTTP POST

The following is a sample HTTP POST request and response. The placeholders shown need to be replaced with actual values.

```
POST /webservices/dataservice/EPOD_dataservice.asmx/EPOD_XML_IMPORT HTTP/1.1
Host: www.calidus-web.com
Content-Type: application/x-www-form-urlencoded
Content-Length: length

IMPORT=string

HTTP/1.1 200 OK
Content-Type: text/xml; charset=utf-8
Content-Length: length

<?xml version="1.0" encoding="utf-8"?>
<string xmlns="ePOD_DataService">string</string>
```

- **EPOD_dataservice2.asmx**

SOAP 1.1

The following is a sample SOAP 1.1 request and response. The placeholders shown need to be replaced with actual values.

```
POST /webservices/dataservice/EPOD_dataservice2.asmx HTTP/1.1
Host: www.calidus-web.com
Content-Type: text/xml; charset=utf-8
```

```
Content-Length: length
SOAPAction: "ePOD_DataService/EPOD_XML_IMPORT"

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <EPOD_XML_IMPORT xmlns="ePOD_DataService">
      <IMPORT>xml</IMPORT>
    </EPOD_XML_IMPORT>
  </soap:Body>
</soap:Envelope>

HTTP/1.1 200 OK
Content-Type: text/xml; charset=utf-8
Content-Length: length

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <EPOD_XML_IMPORTResponse xmlns="ePOD_DataService">
      <EPOD_XML_IMPORTResult>xml</EPOD_XML_IMPORTResult>
    </EPOD_XML_IMPORTResponse>
  </soap:Body>
</soap:Envelope>
```

SOAP 1.2

The following is a sample SOAP 1.2 request and response. The placeholders shown need to be replaced with actual values.

```
POST /webservices/dataservice/EPOD_dataservice2.asmx HTTP/1.1
Host: www.calidus-web.com
Content-Type: application/soap+xml; charset=utf-8
Content-Length: length

<?xml version="1.0" encoding="utf-8"?>
<soap12:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:soap12="http://www.w3.org/2003/05/soap-envelope">
  <soap12:Body>
    <EPOD_XML_IMPORT xmlns="ePOD_DataService">
      <IMPORT>xml</IMPORT>
    </EPOD_XML_IMPORT>
  </soap12:Body>
</soap12:Envelope>

HTTP/1.1 200 OK
Content-Type: application/soap+xml; charset=utf-8
Content-Length: length

<?xml version="1.0" encoding="utf-8"?>
<soap12:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:soap12="http://www.w3.org/2003/05/soap-envelope">
  <soap12:Body>
    <EPOD_XML_IMPORTResponse xmlns="ePOD_DataService">
      <EPOD_XML_IMPORTResult>xml</EPOD_XML_IMPORTResult>
    </EPOD_XML_IMPORTResponse>
  </soap12:Body>
</soap12:Envelope>
```

10.3 Processing Responses through Web Services

The response data is an XML file (either string data or an XML object), as shown in the calling methods above. The result is governed by a schema, in the same way that the import files are. All XSD schemas will be provided to you.

The import processor will validate the entire file to the import schema. If this fails, the file will be rejected - all errors found will be exported in the response file.

If the pre-process is successful, each record will then be attempted to be loaded. If any of these fail for any reason, the discovered error will be reported in the response file.

If the loading of all records proceeds without an issue, the acknowledged response will be sent.

Note: It is not recommended to attempt to resend files unless the errors have been investigated and resolved. This is the responsibility of the sending system or the users of that system to do this.

Note: It is recommended that this XML Response fragment is stored for later auditing of potential issues.

Note: The Result and Error tags will not be checked for content, only structure. Therefore these tags can contain any informative data that the producing system deems adequate for identifying issues.

An example of an Success and Failure response to an import into *CALIDUS* ePOD are shown below:

```
<EPOD_IMPORT_RESPONSE RESULT="NAK">
    <ERRORS>
        <ERROR error="The element 'EPOD_LOAD' has invalid child element 'EPL_SITE_IDX'.
                      List of possible elements expected: 'EPL_SITE_ID'."
            exception="System.Xml.Schema.XmlSchemaValidationException:
                       The element 'EPOD_LOAD' has invalid child element 'EPL_SITE_IDX'.
                       List of possible elements expected: 'EPL_SITE_ID'."/>
    </ERRORS>
</EPOD_IMPORT_RESPONSE>

<EPOD_IMPORT_RESPONSE RESULT="ACK">
    <RESULTS>
        <RESULT>
            <ID>Load: LOAD001</ID>
            <STATUS>Status: Load updated and at status C</STATUS>
        </RESULT>
        <RESULT>
            <ID>Job: JOB001</ID>
            <STATUS>Status: Job updated and at status P</STATUS>
        </RESULT>
        <RESULT>
            <ID>EPOD_CUSTOMER: Cust001</ID>
            <STATUS>Status: EPOD_CUSTOMER Updated</STATUS>
        </RESULT>
        <RESULT>
            <ID>Container: JOB001-01</ID>
            <STATUS>Status: Container created on Job: JOB001</STATUS>
        </RESULT>
        <RESULT>
            <ID>Container: JOB001-02</ID>
            <STATUS>Status: Container created on Job: JOB001</STATUS>
        </RESULT>
        <RESULT>
            <ID>Container: JOB001-03</ID>
            <STATUS>Status: Container created on Job: JOB001</STATUS>
        </RESULT>
        <RESULT>
            <ID>Job: JOB002</ID>
            <STATUS>Status: Job updated and at status X</STATUS>
        </RESULT>
        <RESULT>
            <ID>EPOD_CUSTOMER: Cust001</ID>
            <STATUS>Status: EPOD_CUSTOMER Updated</STATUS>
        </RESULT>
        <RESULT>
            <ID>Container: JOB002-01</ID>
            <STATUS>Status: Container created on Job: JOB002</STATUS>
        </RESULT>
        <RESULT>
            <ID>Container: JOB002-02</ID>
            <STATUS>Status: Container created on Job: JOB002</STATUS>
        </RESULT>
        <RESULT>
            <ID>Container: JOB002-03</ID>
            <STATUS>Status: Container created on Job: JOB002</STATUS>
        </RESULT>
    </RESULTS>
</EPOD_IMPORT_RESPONSE>
```

10.4 Export Process

A process runs on a timed schedule within the *CALIDUS* ePOD application, to pick up any jobs that have been completed and export them to external systems.

10.5 Export Message Content

A basic list if all the fields in the interface for Job follows. A full spreadsheet of all the export flows and fields containing all the limitations on length and defaulted values is provided separately.

Note: The content of the exported data varies and expands as the *CALIDUS* ePOD product expands. As new items are added to the application, the spreadsheet will be modified and issued to you, to aid in any mapping of data into your application. The Export Spreadsheet is referenced in Appendix A.

EPOD_LOAD

Name	Description
EPL_SITE_ID	Unique reference of the site that the Load belongs to.
EPL_LOAD_ID	Unique reference of the Load.
EPL_LOAD_START_PLANNED_DATE	The planned start date and time. This is used to sequence the load, and decide which load is provided to the user.
EPL_LOAD_START_PLANNED_TIME	
EPL_LOAD_END_PLANNED_DATE	The planned end date and time
EPL_LOAD_END_PLANNED_TIME	
EPL_VEHICLE_ID	The Vehicle ID used for completion of this Load
EPL_USER_ID	The user who completed the load
EPL_STATUS	EPL_STATUS: Status of the current load
EPL_LOAD_START_ACTUAL_DATE	The actual start date and time
EPL_LOAD_START_ACTUAL_TIME	
EPL_LOAD_END_ACTUAL_DATE	The actual end date and time
EPL_LOAD_END_ACTUAL_TIME	
EPL_LOAD_DISTANCE_PLANNED	The distance planned by the route planner
EPL_LOAD_DISTANCE_ACTUAL	The actual distance travelled (not used)
EPL_MILEAGE_START	The mileage taken at the start and end of the load. If enabled, this replaces distance actual.
EPL_MILEAGE_END	
EPL_LAST_CHANGED_DATE	
EPL_LAST_CHANGED_TIME	
EPL_UDF_LOAD_START	Contains a UDF XML string of any metrics entered at Load Start
EPL_UDF_LOAD_END	Contains a UDF XML string of any metrics entered at Load End
EPL_LOAD_INFORMATION	To be populated with any information to be displayed to the user regarding the Load.
EPL_TIMEZONE	
EPL_TRAILER_ID	Trailer Number. To be used if the vehicle being used to fulfil the load is a Tractor unit.
EPL_ROUTE_CODE	Route identifier against the trip
EPOD_JOBS	Contains a series of EPOD_JOB objects, detailing all the jobs assigned to this load.

EPOD_JOB

Name	Description
EPL_SITE_ID	Unique Reference for the Site that the Job belongs to
EPL_JOB_ID	Unique reference for the job. If not provided on Import, this will be generated by EPOD
EPL_LOAD_ID	Unique Reference for the Load that the Job belongs to. If not provided, defaulted from the enclosing EPOD_LOAD
EPL_JOB_TYPE	"D"-Delivery, "C"-Collection, "S"-Service

Name	Description
EPL_JOB_GROUP	This is setup within the Admin system. Each job group has its own settings and will determine how the Job is processed dependant on these settings.
EPL_CUSTOMER_CODE	Customer Code from external system. If not provided, one will be generated from EPL_CUSTOMER_NAME
EPL_SEQUENCE	The sequence of the job. This could be the sequence sent on Import, a pre-defined sequence (if one was not provided) or a user-changed value (if enabled)
EPL_START_PLANNED_DATE	Collection/Delivery Window
EPL_START_PLANNED_TIME	Collection/Delivery Window
EPL_END_PLANNED_DATE	Collection/Delivery Window
EPL_END_PLANNED_TIME	Collection/Delivery Window
EPL_JOB_ADDRESS	A flag indicating whether this is a default Customer Address or a specific address for this job alone.
EPL_CUSTOMER_NAME	The Name of the customer
EPL_ADDRESS_1	
EPL_ADDRESS_2	
EPL_ADDRESS_3	
EPL_ADDRESS_4	
EPL_ADDRESS_5	
EPL_POSTCODE	
EPL_CONTACT	
EPL_TELEPHONE	
EPL_EMAIL	
EPL_LAT	Latitude of the address for the job - used to create addresses
EPL_LONG	Longitude of the address for the job - used to create addresses
EPL_JOB_CODE	External reference for the Job. This element can be used to link a collection and delivery together under the same reference. So, if an order is being collected at A and delivered at B, there are 2 jobs, each with a unique Job ID, but with the same Job Code. Optionally, EPOD will keep the Delivery leg of a linked job updated with the information captured from the collection.
EPL_CUST_REF	Customer's Order Reference
EPL_SO_NUMBER	Sales Order Reference.
EPL_ORDER_DATE	Date Order created - defaulted to the date the order was received if not provided
EPL_OWNER_NAME	Can be used as a display field for documentation, or indicating another Site ID that owns the job that is being executed by this site.
EPL_EXT_REF	An external reference for the host system if required. For Partnerlink, this will be the PartnerJobID.
EPL_STATUS	EPL_STATUS: Status of the job. "C" for any items delivered/collected with any quantity, "X" if cancelled
EPL_LINKED_ID	An identifier that informs the system that this job has been linked (consolidated) with other jobs manually by the driver. The format is irrelevant - if multiple jobs on the same load have the same linked ID, they were consolidated.
EPL_JOB_INSTRUCTION	Instructions for the Driver
EPL_REASON_CODE	If a job has been cancelled, the Job-level reason code entered by the user is held here.
EPL_LINKED_REASON	If the job is a delivery, and a collection of the same load with the same EPL_JOB_CODE is cancelled, this delivery will be cancelled, and this field will be set to "Y"
EPL_PHOTO_ID	N/A
EPL_PHOTO_DESCRIPTION	N/A
EPL_START_ACTUAL_DATE	The date the user actually chose to start the job. Format: YYYYMMDD
EPL_START_ACTUAL_TIME	The time the user actually chose to start the job. Format HHMMSSNN
EPL_END_ACTUAL_DATE	The date the user completed or cancelled the job. Format: YYYYMMDD
EPL_END_ACTUAL_TIME	The time the user completed or cancelled the job. Format HHMMSSNN
EPL_DISTANCE_PLANNED	
EPL_DISTANCE_ACTUAL	

Name	Description
EPL_DRIVING_TIME	
EPL_INVOICED	A flag indicating the driver ticked an Invoiced box when completing the job.
EPL_CUST_SIGNATORY	The name of the customer signatory on the job.
EPL_OFFICE_INSTRUCTION	Instructions for Admin staff
EPL_SIGNED_UNCHECKED	An indication whether the customer signed for the goods without checking them first. Note that this field can be used for any check-box entry, as this is configurable.
EPL_TNCS	An XML fragment, displaying the Terms and Conditions agreed to by the customer when signing for the goods. This can also include up to 3 configurable check-boxes that the user may check.
EPL_ORDER_TIME	Time Order Created
EPL_SALES_CONTACT	The operative who took the order. Can be used as a display field for documentation
EPL_USER_NOTES	Optional Notes entered by the driver while completing the job.
EPL_SERVICE_LEVEL	Display field, containing Service Level text
EPL_LAST_CHANGED_DATE	
EPL_LAST_CHANGED_TIME	
EPL_ARRIVAL_DATE	The date the user indicated they arrived at the destination. Format: YYYYMMDD
EPL_ARRIVAL_TIME	The time the user indicated they arrived at the destination. Format HHMMSSNN
EPL_XF_VALUES	
EPL_TRAILER_ID	To be used if the vehicle being used to fulfil the job is a Tractor unit, and a trailer ID has been entered by the user.
EPL_PF_DEPOT	
EPL_PF_TRACKING_NO	
EPL_JOB_STATUS	A Job Status entered by the driver, usually to indicate whether a job should be re-scheduled. Optional.
EPL_UDF_JOBDETS	Contains user-defined fields entered when processing Collections and Deliveries on the Job Details tab, in UDF formatted XML
EPL_TIMEZONE	TimeZone
EPL_LOADING_TYPE	Controls whether this job is seen to be a Loading task at a depot (Job Type = "C") or unloading at a depot (Job Type = "D"). Values can be "Y" or "N" or "" - only "Y" indicates whether the job is a loading/unloading task.
EPL_GENERATED	Indicates whether the job is generated within C-EPOD.
EPL_SWAP_VEHICLE	Whether the vehicle was swapped
EPL_COL_DATE	Collection Date
EPL_ACCOUNT	Account Name
EPL_JOB_SIGNATURE	The signature taken from the customer when the job was completed. This is in the form of a Base64-encrypted Jpeg file
EPL_PHOTO	N/A
EPL_ENG_SIGNATURE	The signature taken from the driver/engineer when the job was completed, if required. This is in the form of a Base64-encrypted Jpeg file
EPL_APPROVED_IND	If set to 1, the job has been approved in EPOD and no more time/expense entries can be added against the job.
EPL_APPROVED_EMAIL_IND	If set to 1, an automatic email will also be sent by EPOD once the job is approved.
EPL_SUBMITTED_IND	If set to 1, the EPOD device has finished sending time/expense entries against the job.
EPOD_JOB_ADDRESS	Any Job address against the job, if different to the customer address. Consisting of the following tags if present:
EPL_ADDRESS_TYPE	"D" - Delivery, "C" - Collection, "O" - Origin, "F" Final Destination.
EPL_NAME	
EPL_ADDRESS_1	
EPL_ADDRESS_2	
EPL_ADDRESS_3	
EPL_ADDRESS_4	
EPL_ADDRESS_5	
EPL_POSTCODE	
EPL_CONTACT	
EPL_TELEPHONE	

Name	Description
EPL_EMAIL	
EPL_LAT	Latitude of the address
EPL_LONG	Longitude of the address
EPL_TRAVEL_PLANNED	Planned travel time in minutes
EPL_WORK_PLANNED	Planned work time in minutes
EPL_WORK_ACTUAL	Actual work time in minutes
EPL_ODO_START	Start Odometer reading
EPL_ODO_END	End Odometer reading
EPOD_TIME_WINDOWS	Time windows associated to the job
EPOD_TIME_WINDOW	
ETW_TIME_START	Start time for the window
ETW_TIME_END	End time for the window
EPOD_CONTAINERS	Contains a series of EPOD_CONTAINER objects, detailing all the deliverable items on this load. If there are loose products, there will also be a container with ID '000000000000000' holding these products.
EPOD_SERVICES	If the job is a Service, this object contains a series of EPOD_SERVICE objects, each holding all the service-related information for each service item. In that case, no containers or products will be specified against the job.

EPOD_CONTAINER

Name	Description
EPL_SITE_ID	Unique Reference for the Site that the Job belongs to
EPL_JOB_ID	Unique reference for the job. If not provided on Import, this will be generated by EPOD
EPL_CONTAINER_ID	The unique identifier for a container.
EPL_STATUS	Status of the current Container. "C"-Completed, "X"-Cancelled.
EPL_SEQUENCE	A sequence for the containers to be shown on the user's device, in numeric format.
EPL_CONTAINER_PACKAGE_CODE	
EPL_CONTAINER_PACKAGE_DESC	
EPL_REASON_CODE	If a job has been cancelled, the reason code entered by the user is held here.
EPL_LINKED_REASON	If the job is a delivery, and a collection of this container on the same load with the same EPL_JOB_CODE is cancelled, this container will be cancelled, and this field will be set to "Y"
EPL_PHOTO_ID	N/A
EPL_PHOTO	N/A
EPL_PHOTO_DESCRIPTION	N/A
EPL_GROSS_WEIGHT	Gross Weight
EPL_DESCRIPTION_LONG	
EPL_CODE_1	Multi-purpose field
EPL_CODE_2	Multi-purpose field
EPL_CODE_3	Multi-purpose field
EPL_LAST_CHANGED_DATE	
EPL_LAST_CHANGED_TIME	
EPL_CUST_COMMENTS	Optional entry by the user, indicating whether the customer has identified an issue with the received item (a claused receipt).
EPL_VALID_DATE	The date up until the contents of the package are valid - controls warnings at delivery.
EPL_VALID_TIME	The time up until the contents of the package are valid - controls warnings at delivery.
EPL_TYPE	Shows whether this container was Ad Hoc Scanned ("A") or was preplanned (blank)
EPL_CONTAINER_ONLY	Controls whether a container with products inside it has the contents scanned at initial unloading. This is controlled at a job group level, but may be over-ridden per container, to support bulk consolidated pallets, mixed product in totes, etc.

Name	Description
	Multiple values: If omitted or blank - behaviour inherited from the job group Y - contents are never scanned on initial unloading N - contents are always scanned on initial unloading
EPOD_PRODUCTS	Contains a series of EPOD_PRODUCTS objects, detailing the products within the container, or loose products

EPOD_PRODUCT

Name	Description
EPL_SITE_ID	Unique reference of the site that the Product belongs to.
EPL_JOB_ID	Unique reference of the job that the Product belongs to.
EPL_CONTAINER_ID	Unique reference of the container that the Product belongs to. If this is loose product, the container will be "000000000000"
EPL_PRODUCT_CODE	Unique reference of the Product
EPL_SEQUENCE	The sequence of the products within the container. Value must be numeric in the range 0-9999
EPL_DESCRIPTION	Description of the product
EPL_DESCRIPTION_LONG	Long description of the product
EPL_PRODUCT_QTY_PLANNED	
EPL_PRODUCT_QTY_ACTUAL	Actually delivered quantity
EPL_PRODUCT_QTY_CASE	
EPL_PRODUCT_QTY_ORDERED	
EPL_REASON_CODE	If the quantity has changed or the product line has been cancelled, a Detail-level reason code will be present
EPL_LINKED_REASON	EPL_LINKED_REASON: Y if the reason code is carried from the linked collection - defaults to N
EPL_STATUS	EPL_STATUS: Status of the current product. "C" for delivered with any quantity, "X" if cancelled
EPL_PHOTO_ID	N/A
EPL_PHOTO	N/A
EPL_PHOTO_DESCRIPTION	N/A
EPL_PRODUCT_WEIGHT	
EPL_CUST_REF	
EPL_ITEM_TYPE	
EPL_UNIT_TYPE	
EPL_CUST_COMMENTS	Optional entry by the user, indicating whether the customer has identified an issue with the received item (a claused receipt).
EPL_LAST_CHANGED_DATE	
EPL_LAST_CHANGED_TIME	
EPL_UNIT_PRICE	Nett price per unit.
EPL_UNIT_VAT	VAT per unit.

Note: Regarding Signature and Photo data formats in this message: This data is stored and transmitted as a text string, Base64-encrypted. This data can be decoded and saved as binary data once received if required.

A sample of a single job with a single pallet is shown below:


```
<EPOD_EXPORT_JOB>
  <EPOD_JOBS>
    <EPOD_JOB>
      <EPL_SITE_ID>L03</EPL_SITE_ID>
      <EPL_JOB_ID>0000000001</EPL_JOB_ID>
      <EPL_LOAD_ID>000000000002</EPL_LOAD_ID>
      <EPL_JOB_TYPE>D</EPL_JOB_TYPE>
      <EPL_JOB_GROUP>L03</EPL_JOB_GROUP>
      <EPL_JOB_INSTRUCTION>Very Fragile Parcel..Please handle with Care</EPL_JOB_INSTRUCTION>
      <EPL_JOB_SIGNATURE>R0lGODlh4AB4APcA...NKdJTY4EBAA7</EPL_JOB_SIGNATURE>
      <EPL_REASON_CODE></EPL_REASON_CODE>
      <EPL_LINKED_REASON>N</EPL_LINKED_REASON>
```

```
        <EPL_STATUS>C</EPL_STATUS>
        <EPL_CUSTOMER_CODE>OBS</EPL_CUSTOMER_CODE>
        <EPL_PHOTO_ID></EPL_PHOTO_ID>
        <EPL_ENG_SIGNATURE></EPL_ENG_SIGNATURE>
        <EPL_SEQUENCE>1</EPL_SEQUENCE>
        <EPL_START_PLANNED_DATE>20111108</EPL_START_PLANNED_DATE>
        <EPL_START_PLANNED_TIME>12000000</EPL_START_PLANNED_TIME>
        <EPL_END_PLANNED_DATE>0</EPL_END_PLANNED_DATE>
        <EPL_END_PLANNED_TIME>0</EPL_END_PLANNED_TIME>
        <EPL_START_ACTUAL_DATE>20111108</EPL_START_ACTUAL_DATE>
        <EPL_START_ACTUAL_TIME>10490000</EPL_START_ACTUAL_TIME>
        <EPL_END_ACTUAL_DATE>20111108</EPL_END_ACTUAL_DATE>
        <EPL_END_ACTUAL_TIME>10520000</EPL_END_ACTUAL_TIME>
        <EPL_DISTANCE_PLANNED>0</EPL_DISTANCE_PLANNED>
        <EPL_DISTANCE_ACTUAL>0</EPL_DISTANCE_ACTUAL>
        <EPL_DRIVING_TIME>0</EPL_DRIVING_TIME>
        <EPL_CUSTOMER_NAME>OBS Logistics</EPL_CUSTOMER_NAME>
        <EPL_JOB_ADDRESS>N</EPL_JOB_ADDRESS>
        <EPL_ADDRESS_1>Southern Gateway</EPL_ADDRESS_1>
        <EPL_ADDRESS_2>Speke Boulevard</EPL_ADDRESS_2>
        <EPL_ADDRESS_3>Liverpool</EPL_ADDRESS_3>
        <EPL_ADDRESS_4>Merseyside</EPL_ADDRESS_4>
        <EPL_ADDRESS_5></EPL_ADDRESS_5>
        <EPL_POSTCODE>L24 9HZ</EPL_POSTCODE>
        <EPL_CONTACT>Xavier Wai</EPL_CONTACT>
        <EPL_TELEPHONE>01514480331</EPL_TELEPHONE>
        <EPL_EMAIL>x.y@obs-logistics.co.uk</EPL_EMAIL>
        <EPL_INVOICED></EPL_INVOICED>
        <EPL_CUST_SIGNATORY></EPL_CUST_SIGNATORY>
        <EPL_JOB_CODE>L03</EPL_JOB_CODE>
        <EPL_CUST_REF></EPL_CUST_REF>
        <EPL_OFFICE_INSTRUCTION></EPL_OFFICE_INSTRUCTION>
        <EPL_SIGNED_UNCHECKED></EPL_SIGNED_UNCHECKED>
        <EPL_SO_NUMBER></EPL_SO_NUMBER>
        <EPL_TNCS></EPL_TNCS>
        <EPL_ORDER_DATE>0</EPL_ORDER_DATE>
        <EPL_SALES_CONTACT></EPL_SALES_CONTACT>
        <EPL_USER_NOTES></EPL_USER_NOTES>
        <EPL_OWNER_NAME></EPL_OWNER_NAME>
        <EPL_SERVICE_LEVEL></EPL_SERVICE_LEVEL>
        <EPL_LAST_CHANGED_DATE>20120314</EPL_LAST_CHANGED_DATE>
        <EPL_LAST_CHANGED_TIME>9420098</EPL_LAST_CHANGED_TIME>
        <EPOD_CONTAINERS>
          <EPOD_CONTAINER>
            <EPL_SITE_ID>L03</EPL_SITE_ID>
            <EPL_JOB_ID>0000000001</EPL_JOB_ID>
            <EPL_CONTAINER_ID>000000000000001</EPL_CONTAINER_ID>
            <EPL_SEQUENCE>0</EPL_SEQUENCE>
            <EPL_CONTAINER_PACKAGE_CODE>XX</EPL_CONTAINER_PACKAGE_CODE>
            <EPL_CONTAINER_PACKAGE_DESC>Pallet</EPL_CONTAINER_PACKAGE_DESC>
            <EPL_REASON_CODE></EPL_REASON_CODE>
            <EPL_LINKED_REASON></EPL_LINKED_REASON>
            <EPL_STATUS>C</EPL_STATUS>
            <EPL_PHOTO_ID></EPL_PHOTO_ID>
            <EPL_CUST_COMMENTS></EPL_CUST_COMMENTS>
            <EPL_GROSS_WEIGHT>120</EPL_GROSS_WEIGHT>
            <EPL_DESCRIPTION_LONG></EPL_DESCRIPTION_LONG>
            <EPL_CODE_1>1</EPL_CODE_1>
            <EPL_CODE_2></EPL_CODE_2>
            <EPL_CODE_3></EPL_CODE_3>
            <EPL_LAST_CHANGED_DATE>20120614</EPL_LAST_CHANGED_DATE>
            <EPL_LAST_CHANGED_TIME>16362322</EPL_LAST_CHANGED_TIME>
          </EPOD_CONTAINER>
        </EPOD_CONTAINERS>
        <EPOD_SERVICES></EPOD_SERVICES>
      </EPOD_JOB>
    </EPOD_JOBS>
  </EPOD_EXPORT_JOB>
```


Note: The signature has been shortened for the purposes of this document.

Note: The content of the exported data varies and expands as the *CALIDUS* ePOD product expands. As new items are added to the application, a full XSD will be modified and issued to you, to aid in validating data passed into your application. The Import XSD is referenced in Appendix A.

10.5.1 Vehicle Checks Format

Vehicle Defect Checks are configurable within *CALIDUS* ePOD. The resulting checks are stored naturally within the database as XML fragments, which may be validated with its own XSD. The vehicle checks may only be requested through the EPOD_EXPORT_VEHICLE_CHECKS webservice request, and the response XSD is referenced in Appendix A.

Vehicle Checks XML exports as a series of questions and answers from the device and may be of several different types:

- Numeric - the user will be prompted to enter a number only as the response , for example, What is the current Mileage?
- Text - The user will be prompted to enter a text response.
- Boolean - The user is prompted to enter a yes or no response, for example, Does the Windscreen have any cracks. The options allowed can be cycled through by pressing on the button.
- Option - The user will be prompted with a number of boxes that must be checked. The options allowed can be cycled through by pressing on the button.
- Multi-state Check boxes - the user can cycle through all available values on the check-box, for example, unchecked (blank), Failed (N), Not Applicable (Y), Passed (Y), etc.

An example export is shown below:

```
<EPOD_EXPORT_VEHICLECHECKS_RESPONSE RESULT="ACK">
    <EPOD_VEHICLE_CHECKS>
       <EPOD_VEHICLE_CHECK>
           <EPL_SITE_ID>DEMO</EPL_SITE_ID>
           <EPL_VEHICLE_ID>VAN</EPL_VEHICLE_ID>
           <EPL_VEHICLE_CHECK_DATE>20141217</EPL_VEHICLE_CHECK_DATE>
           <EPL_VEHICLE_CHECK_TIME>0</EPL_VEHICLE_CHECK_TIME>
           <EPL_USER_ID>MATT</EPL_USER_ID>
           <VEHICLE_CHECK_DATA>
               <QUESTION ID="0001">
                   <TEXT>Please check the following items.</TEXT>
                   <FORMAT>X</FORMAT>
                   <SKIPABLE>N</SKIPABLE>
                   <ITEMS>
                       <ITEM ANSWER="Y">Oil Level</ITEM>
                       <ITEM ANSWER="Y">Tyres</ITEM>
                       <ITEM ANSWER="Y">Brakes</ITEM>
                       <ITEM ANSWER="Y">Water</ITEM>
                       <ITEM ANSWER="Y">Lights</ITEM>
                   </ITEMS>
               </QUESTION>
               <QUESTION ID="0002">
                   <TEXT>Please enter any comments.</TEXT>
                   <FORMAT>T</FORMAT>
                   <SKIPABLE>Y</SKIPABLE>
                   <ANSWER>na</ANSWER>
               </QUESTION>
               <QUESTION ID="0003">
                   <TEXT>What is the current Mileage?</TEXT>
                   <FORMAT>N</FORMAT>
                   <SKIPABLE>N</SKIPABLE>
                   <ANSWER>1000</ANSWER>
               </QUESTION>
           </VEHICLE_CHECK_DATA>
       </EPOD_VEHICLE_CHECK>
   </EPOD_VEHICLE_CHECKS>
</EPOD_EXPORT_VEHICLECHECKS_RESPONSE>
```

10.5.2 UDF Format

The *CALIDUS* ePOD product can be configured to accept data entry of any non-critical field at several major points in processing jobs, for example:

- Load Start/End Metrics
- General Job Details
- Service:
    - Prework/Postwork checks
    - Diagnosis/Report fields

The mechanism of User-defined Fields (UDF) allows this configuration.

Similarly to Vehicle Checks, UDF responses are held natively within the database as XML fragments, which may be validated with its own XSD. The vehicle checks may only be requested through the EPOD_EXPORT_VEHICLE_CHECKS webservice request, and the response XSD is referenced in Appendix A.

The allowed field types are extended from Vehicle Checks, allowing also:

- Label.
- Numeric.
- Text.
- Text Area.
- Checks.
- Options.
- Tri-state Checks.
- Tri-state Options.
- Drop-down lists.

The format differs slightly - a sample is shown below:

```
<FORM NAME="Job Details" REQUIRED="Y">
  <FIELD ID="WEIGHBRIDGE_WEIGHT">
      <TEXT>Weight</TEXT>
      <FORMAT>N</FORMAT>
      <REQUIRED>^0*[1-9][0-9]{2,4}$</REQUIRED>
      <VALUE>123.45</VALUE>
  </FIELD>
  <FIELD ID="WEIGHBRIDGE_TICKET">
      <TEXT>Weighbridge Number</TEXT>
      <FORMAT>T</FORMAT>
      <REQUIRED>Y</REQUIRED>
      <VALUE>162553</VALUE>
  </FIELD>
</FORM>
```

Note: The UDF data may be HTML-safe encoded.

10.5.3 Terms & Conditions

Terms and Conditions displayed to customers are configurable within *CALIDUS* ePOD. The format is similar to the above XML extracts, with a simple HTML-style INPUT tag, as follows:

```
<TERMS_CONDITIONS>
   <TEXT>I certify that the information in A, B and C is correct, and that the carrier
         is registered.<br />
         I confirm that I have fulfilled my duty to apply the waste hierarchy as required by
         Regulation 12 of the Waste (England and Wales) Regulations 2011.</TEXT>
   <CHECKS>
       <INPUT type="checkbox">CHECK1</INPUT>
       <INPUT type="checkbox">CHECK2</INPUT>
       <INPUT type="checkbox">CHECK3</INPUT>
   </CHECKS>
</TERMS_CONDITIONS>
```

Note: The Terms and Conditions data may be HTML-safe encoded.

Note: Terms and Conditions may also be configured as UDF. See the UDF Format section above for details on how this may be formatted.

10.6 Export Mechanisms

10.6.1 Web Services (Push)

The identity of the web service will be defined by the TMS team, requiring a string (rather than an XML object) input.

Each job will be sent independently, resulting in a single call to the external web service to add this job.

When the file is received and processed by the web service, the system expects the web service to respond in the format, as shown in previous sections. The exact same format and structure should be used as described here. The content may be as detailed as required by the TMS system.

10.6.2 Web Services (Pull)

Web Services are supplied for external systems to request information on Loads and Jobs, by ID or Date Since. The Web Services are hosted as part of the main *CALIDUS* ePOD server and run as SOAP or HTML Web Services. Response Data is formatted in a strongly-typed XML file, validated by a full XSD.

The web service supports the following methods:

- Loads (including all Jobs underneath) by ID or Date
  - EPOD_XML_EXPORT_LOAD
  - EPOD_XML_EXPORT_LOAD_DATE
  - EPOD_XML_EXPORT_LOAD_DATE_RANGE
- Jobs by ID or Date
  - EPOD_XML_EXPORT_JOB
  - EPOD_XML_EXPORT_JOB_DATE
  - EPOD_XML_EXPORT_JOB_DATE_RANGE
- Vehicle information
  - EPOD_XML_EXPORT_VEHICLE_REQUEST
  - EPOD_XML_EXPORT_VEHICLE_CHECKS
- Other
  - EPOD_XML_EXPORT_REPORT - running and exporting report results
  - EPOD_XML_EXPORT_PHOTO - exporting photos from loads, jobs, containers, products, services, etc.

Note: When pulling data from *CALIDUS* ePOD, the web service will pass out the data matching the criteria in a single response. Subsequent requests will pass out the same data - when the process exports the load and/or jobs, they are not marked as exported by the system.

Each web service method requires a specific XML request payload, detailed in the following sections.

10.6.2.1 EPOD_XML_EXPORT_LOAD

This web service method allows requesting the details of a load (and all jobs within it) by the Load ID.

The following is a sample request to this web service method:

```
<EPOD_EXPORT_LOAD EPL_SITE_ID="DEMO" EPL_USER_ID="ADM" EPL_USER_PASSWORD="TEST">
   <EPOD_LOADS>
       <EPOD_LOAD>
           <EPL_SITE_ID>DEMO</EPL_SITE_ID>
           <EPL_LOAD_ID>00000000000T</EPL_LOAD_ID>
           </EPOD_LOAD>
       </EPOD_LOADS>
</EPOD_EXPORT_LOAD>
```

The web service will respond as follows:

Load found:

```
<EPOD_EXPORT_LOAD_RESPONSE RESULT="ACK">
   <EPOD_LOADS>
           ....
   </EPOD_LOADS>
```


Ready for What's Next, Now™

```
</EPOD_EXPORT_LOAD_RESPONSE>
```

Errors:

```
<EPOD_EXPORT_LOAD_RESPONSE RESULT="NAK">
   <ERRORS>
       <ERROR error="USER DETAILS NOT VALID"/>
   </ERRORS>
</EPOD_EXPORT_LOAD_RESPONSE>
```

10.6.2.2 EPOD_XML_EXPORT_LOAD_DATE

This web service method allows requesting the details of a load (and all jobs within it) by the Planned Start Date.

The following is a sample request to this web service method:

```
<EPOD_EXPORT_LOAD_DATE EPL_SITE_ID="DEMO" EPL_USER_ID="ADM" EPL_USER_PASSWORD="TEST">
   <EPL_LOAD_START_PLANNED_DATE>20181217</EPL_LOAD_START_PLANNED_DATE>
</EPOD_EXPORT_LOAD_DATE>
```

Note: This web service method is a form of request EPOD_EXPORT_LOAD and responds with this root response tag *without* "DATE".

Load found:

```
<EPOD_EXPORT_LOAD_RESPONSE RESULT="ACK">
   <EPOD_LOADS>
            ....
   </EPOD_LOADS>
</EPOD_EXPORT_LOAD_RESPONSE>
```

Errors:

```
<EPOD_EXPORT_LOAD_RESPONSE RESULT="NAK">
   <ERRORS>
       <ERROR error="Specified argument was out of the range of valid values. Parameter name: index"></ERRO
   </ERRORS>
</EPOD_EXPORT_LOAD_RESPONSE>
```

10.6.2.3 EPOD_XML_EXPORT_LOAD_DATE_RANGE

This web service method allows requesting the details of a load (and all jobs within it) by a range of dates when the load was last modified.

The following is a sample request to this web service method:

```
<EPOD_EXPORT_LOAD_CHANGED EPL_SITE_ID="DEMO" EPL_USER_ID="ADM" EPL_USER_PASSWORD="TEST">
   <DATE_TIME_FROM>2016-11-18T00:00:00</DATE_TIME_FROM>
   <DATE_TIME_TO>2017-11-19T00:00:00</DATE_TIME_TO>
</EPOD_EXPORT_LOAD_CHANGED>
```

Note: This web service method is a form of request EPOD_EXPORT_LOAD and responds with this root response tag *without* "DATE".

Load found:

```
<EPOD_EXPORT_LOAD_RESPONSE RESULT="ACK">
   <EPOD_LOADS>
            ....
   </EPOD_LOADS>
</EPOD_EXPORT_LOAD_RESPONSE>
```

Errors:

```
<EPOD_EXPORT_LOAD_RESPONSE RESULT="NAK">
   <ERRORS>
```

```
        <ERROR error="USER DETAILS NOT VALID"/>
    </ERRORS>
</EPOD_EXPORT_LOAD_RESPONSE>
```

10.6.2.4 EPOD_XML_EXPORT_JOB

This web service method allows requesting the details of a job by the specific job ID, which will have been provided to the system creating the job when the job was initially created.

The following is a sample request to this web service method:

```
<EPOD_EXPORT_JOB EPL_SITE_ID="DEMO" EPL_USER_ID="ADM" EPL_USER_PASSWORD="TEST">
    <EPOD_JOBS>
        <EPOD_JOB>
            <EPL_SITE_ID>DEMO</EPL_SITE_ID>
            <EPL_JOB_ID>12345678CR</EPL_JOB_ID>
        </EPOD_JOB>
    </EPOD_JOBS>
</EPOD_EXPORT_JOB>
```

Job Found:

```
<EPOD_EXPORT_JOB_RESPONSE RESULT="ACK">
    <EPOD_JOBS>
    ...
    </EPOD_JOBS>
</EPOD_EXPORT_JOB_RESPONSE>
```

Errors:

```
<EPOD_EXPORT_JOB_RESPONSE RESULT="NAK">
    <ERRORS>
        <ERROR error="NO VALUE FOR EPL_JOB_ID"></ERROR>
    </ERRORS>
</EPOD_EXPORT_JOB_RESPONSE>
```

10.6.2.5 EPOD_XML_EXPORT_JOB_DATE

This web service method allows requesting the details of a job by the Planned Start Date.

The following is a sample request to this web service method:

```
<EPOD_EXPORT_JOB_DATE EPL_SITE_ID="DEMO" EPL_USER_ID="ADM" EPL_USER_PASSWORD="TEST">
    <EPL_START_PLANNED_DATE>20161118</EPL_START_PLANNED_DATE>
</EPOD_EXPORT_JOB_DATE>
```

Note: This web service method is a form of request EPOD_EXPORT_JOB and responds with this root response tag *without* "DATE".

Jobs found:

```
<EPOD_EXPORT_JOB_RESPONSE RESULT="ACK">
    <EPOD_JOBS>
    ....
    </EPOD_JOBS>
</EPOD_EXPORT_JOB_RESPONSE>
```

Errors:

```
<EPOD_EXPORT_JOB_RESPONSE RESULT="NAK">
     <ERRORS>
         <ERROR error="NO VALUE FOR EPL_START_DATE"></ERROR>
     </ERRORS>
</EPOD_EXPORT_JOB_RESPONSE>
```

10.6.2.6 EPOD_XML_EXPORT_JOB_DATE_RANGE

This web service method allows requesting the details of a job by a range of dates when the job was last modified.

The following is a sample request to this web service method:

```
<EPOD_EXPORT_JOB_CHANGED EPL_SITE_ID="DEMO" EPL_USER_ID="ADM" EPL_USER_PASSWORD="TEST">
   <DATE_TIME_FROM>2016-12-16T17:38:46</DATE_TIME_FROM>
   <DATE_TIME_TO>2017-12-16T19:12:44</DATE_TIME_TO>
</EPOD_EXPORT_JOB_CHANGED>
```

Note: This web service method is a form of request EPOD_EXPORT_JOB and responds with this root response tag *without* "DATE".

Jobs found:

```
<EPOD_EXPORT_JOB_RESPONSE RESULT="ACK">
   <EPOD_JOBS>
   ....
   </EPOD_JOBS>
</EPOD_EXPORT_JOB_RESPONSE>
```

Errors:

```
<EPOD_EXPORT_JOB_RESPONSE RESULT="NAK">
   <ERRORS>
       <ERROR error="Column &#39;EPL_INVOICED_IND&#39; does not belong to table ."></ERROR>
   </ERRORS>
</EPOD_EXPORT_JOB_RESPONSE>
```

10.6.2.7 EPOD_XML_EXPORT_REPORT

This web service method allows you to request a report to be run.

Note: At this time, only the Mash OTIF report is available to be run through this method.

The core parameter of the request is Report Type - this currently only supports the value "MASHOTIFREPORT".

The parameters required for the report type selected are then included.

For the Mash OTIF report, they are:

Parameter	Name	Reqd	Notes
Date Type	DATE_TYPE	Y	Values "PLANNED" or "ACTUAL".
Date From	DATE_FROM	Y	Format "DD/MM/YYYY".
Date To	DATE_TO	Y	Format "DD/MM/YYYY".
Customer Code	EPL_CUSTOMER_CODE	N	
Load ID	EPL_LOAD_ID	N	
Route Code	EPL_ROUTE_CODE	N	

The following is a sample request to this web service method:

```
<EPOD_EXPORT_REPORT EPL_SITE_ID="" EPL_USER_ID="" EPL_USER_PASSWORD="">
    <REPORT_TYPE>MASHOTIFREPORT</REPORT_TYPE>
    <DATE_TYPE>PLANNED</DATE_TYPE>
    <DATE_FROM>16/12/2008</DATE_FROM>
    <DATE_TO>16/12/2019</DATE_TO>
    <EPL_CUSTOMER_CODE></EPL_CUSTOMER_CODE>
    <EPL_LOAD_ID></EPL_LOAD_ID>
    <EPL_ROUTE_CODE></EPL_ROUTE_CODE>
</EPOD_EXPORT_REPORT>
```

The process will return the report results as an XML payload.

Report run:

```
<EPOD_EXPORT_REPORT_RESPONSE RESULT="ACK">
    <NewDataSet>
        <MashOTIFReport>
            <Customer_Code>M1</Customer_Code>
            <Customer_Name>Manchester Blood Centre</Customer_Name>
            <Load_ID>TRN-00001432</Load_ID>
            <Job_Code>AHC01_TRN-00001432</Job_Code>
            <Status>C</Status>
            <Reason/>
            <Sequence>5</Sequence>
            <Service/>
            <Planned_Date/>
            <Planned_Time/>
            <Arrival_Date/>
            <Arrival_Time/>
            <On_Time>Y</On_Time>
        </MashOTIFReport>
        <MashOTIFReport>
            <Customer_Code>M1</Customer_Code>
            <Customer_Name>Manchester Blood Centre</Customer_Name>
            <Load_ID>TRN-00001432</Load_ID>
            <Job_Code>NHS1432-1</Job_Code>
            <Status>C</Status>
            <Reason/>
            <Sequence>1</Sequence>
            <Service/>
            <Planned_Date>23/10/2014</Planned_Date>
            <Planned_Time>14:44</Planned_Time>
            <Arrival_Date/>
            <Arrival_Time/>
            <On_Time>N</On_Time>
        </MashOTIFReport>
        ...
    </NewDataSet>
</EPOD_EXPORT_REPORT_RESPONSE>
```

The data returned depends on the report being run. Commonly:

- the report data will be encapsulated by the tag <NewDataSet>.
- each row of the report will be encapsulated by the dataset name. For a single tab report, this is typically the report name. For a multi-tab report, this is typically the tab name.
- multi-tab reports will have multiple row tags, one for each tab in the report.
- data tags will be named as per the column in the report, with special characters and white-space replaced with underscore (_) characters.

Error example:

```
<EPOD_EXPORT_REPORT_RESPONSE RESULT="NAK">
    <ERRORS>
        <ERROR error="USER DETAILS NOT VALID"></ERROR>
    </ERRORS>
</EPOD_EXPORT_REPORT_RESPONSE>
```

10.6.2.8 EPOD_XML_EXPORT_VEHICLE_REQUEST

This web service method allows requesting the details of vehicles in *CALIDUS* ePOD.

The following is a sample request to this web service method:

```
<EPOD_EXPORT_VEHICLE_REQUEST EPL_SITE_ID="DEMO" EPL_USER_ID="ADM" EPL_USER_PASSWORD="TEST">
   <EPL_VEHICLE_ID>27</EPL_VEHICLE_ID>
</EPOD_EXPORT_VEHICLE_REQUEST>
```

Vehicle found:

```
<EPOD_EXPORT_VEHICLE_RESPONSE RESULT="ACK">
```

```
    <EPOD_VEHICLE>
    ...
     </EPOD_VEHICLE>
</EPOD_EXPORT_VEHICLE_RESPONSE>
```

Data returned:

Name	Description
EPL_SITE_ID	Unique reference of the site to which the vehicle belongs.
EPL_VEHICLE_REG	The vehicle registration plate.
EPL_DESCRIPTION	A description of the vehicle, usually used for the vehicle type.
EPL_VEHICLE_MILEAGE	N/A
EPL_VEHICLE_CHECK_DATE	The date that this vehicle was last checked for defects, in format YYYYMMDD.
EPL_VEHICLE_CHECK_TIME	The time that this vehicle was last updated, in format YYYYMMDD.
EPL_VEHICLE_CHECK_DRIVER	The user ID of the driver that last checked this vehicle for defects.
EPL_STATUS	The status of the vehicle with the values: "Y" - Active; "N" - Inactive and; "X" - Deleted.
EPL_LAST_CHANGED_DATE	The date that this vehicle was last updated, in format YYYYMMDD.
EPL_LAST_CHANGED_TIME	The time that this vehicle was last updated, in format HHMMSSNN.
EPL_LAST_POSITION	Last known position of the vehicle in a pair of Decimal Degrees format e.g. 53.3491645,-2.852224
EPL_LAST_POSITION_DATE	The date that this vehicle's position was last updated, in format YYYYMMDD.
EPL_LAST_POSITION_TIME	The time that this vehicle's position was last updated, in format HHMMSSNN
EPL_EXT_REF	If *CALIDUS* ePOD is configured for connection to an external tracking sustem (such as TomTom WEBFLEET), this will contain the the vehicle's ID from this system.

Errors:

```
<EPOD_EXPORT_VEHICLE_RESPONSE RESULT="NAK">
   <ERRORS>
       <ERROR error="NO VALUE FOR EPL_VEHICLE_ID" ></ERROR>
   </ERRORS>
</EPOD_EXPORT_VEHICLE_RESPONSE>
```

10.6.2.9 EPOD_XML_EXPORT_VEHICLE_CHECKS

This web service method allows requesting the details of the vehicle checks for a site.

Note: This request differs to the other requests in that, once vehicle check data has been served in response to a request, it is marked as processed and will not be returned again.

The following is a sample request to this web service method:

```
<EPOD_EXPORT_VEHICLECHECKS EPL_SITE_ID="DEMO" EPL_USER_ID="ADM" EPL_USER_PASSWORD="TEST">
</EPOD_EXPORT_VEHICLECHECKS>
```

Checks found:

```
<EPOD_EXPORT_VEHICLECHECKS_RESPONSE RESULT="ACK">
    <EPOD_VEHICLE_CHECKS>
    ...
    </EPOD_VEHICLE_CHECKS>
</EPOD_EXPORT_VEHICLECHECKS_RESPONSE>
```

Data returned:

Name	Description
EPL_SITE_ID	Unique reference of the site to which the vehicle belongs.
EPL_VEHICLE_ID	The site's unique vehicle ID, typically the vehicle registration plate.
EPL_USER_ID	The user ID of the driver that completed this vehicle defect check.
EPL_VEHICLE_CHECK_DATE	The date that this vehicle defect was completed, in format YYYYMMDD.
EPL_VEHICLE_CHECK_TIME	The time that this vehicle defect was completed, in format HHMMSSNN.
EPL_VEHICLE_CHECK_DATA	The vehicle checks themselves, in UDF format.

Name	Description
EPL_XFER_FLAG	N/A
EPL_STATUS	The status of the defect check. One of: "P" - Passed; "D" - Defects Raised and; "R" - Defects resolved.
EPL_RES_USER_ID	If defects have been raised and resolved, the *CALIDUS* ePOD user ID that resolved them.
EPL_RES_DATE	If defects have been raised and resolved, the date that the resolution took place, in YYYYMMDD format.
EPL_RES_TIME	If defects have been raised and resolved, the time that the resolution took place, in HHMMSSNN format.
EPL_RES_COMMENT	If defects have been or are in the process of being resolved, comments from the resolvers.

Errors:

```
<EPOD_EXPORT_VEHICLECHECKS_RESPONSE RESULT="NAK">
   <ERRORS>
       <ERROR error="USER DETAILS NOT VALID"></ERROR>
   </ERRORS>
</EPOD_EXPORT_VEHICLECHECKS_RESPONSE>
```

10.6.2.10 EPOD_XML_EXPORT_PHOTO_REQUEST

This web service method allows requesting the details of photos in *CALIDUS* ePOD.

The following is a sample request to this web service method:

```
<EPOD_EXPORT_PHOTO EPL_SITE_ID="DEMO" EPL_USER_ID="ADM" EPL_USER_PASSWORD="TEST">
  <EPL_SITE_ID>DEMO</EPL_SITE_ID>
  <EPL_JOB_CODE>1280076</EPL_JOB_CODE>
  <EPL_JOB_TYPE>C</EPL_JOB_TYPE>
</EPOD_EXPORT_PHOTO>
```

Parameters:

Name	Description
EPL_SITE_ID	Must supply Site
EPL_LOAD_ID	Can select load by load ID - returns all load level images for that load.
EPL_JOB_ID	Can select job by job ID - returns all job-level photos for that job, and all child photos (if a collection or delivery, all container and product photos, if a service, all service photos).
EPL_JOB_CODE	Can select job by job code and type - returns all job-level photos for that job, and all child photos (if a collection or delivery, all container and product photos, if a service, all service photos).
EPL_JOB_TYPE	Type for above, one of "C" - collection, "D" - delivery or "S" - service.
EPL_CONTAINER_ID	Can select container by container ID from specified job - returns all container-level photos for that container.
EPL_PRODUCT_CODE	Can select product by product ID and sequence from specified job and container - returns all product-level photos for that product/sequence. If container specified, selects product from that container, otherwise loose products.
EPL_SEQUENCE	Product Sequence
EPL_SERVICE_ID	Can select service by service ID - returns all service-level photos for that service item.
EPL_PHOTO_TYPE	Can filter photos returned by photo type: • For load-only photos, "L". • For load start UDF-only photos, "LSU". • For load end UDF-only photos, "LEU". • For job-only photos, "J". • For job UDF-only photos, "JU". • For container-only photos, "C". • For container UDF-only photos, "CU". • For product-only photos, "P". • For product UDF-only photos, "PU".

Name	Description
	• For service-only photos, "S". • For service information-only photos, "SI". • For service information UDF-only photos, "SIU". • For service post-check UDF-only photos, "SPO". • For service pre-check UDF-only photos, "SPR". • For service diagnosis UDF-only photos, "SDU". Note: Photo Type MUST be specified if retrieving Container, Product, Service or UDF photos.
EPL_PHOTO_ID	Can select photo by photo ID - returns that photo.
EPL_UDF_ID	Can filter photos returned by UDF ID.

}

A sample response, when a photo is found:

```
<EPOD_EXPORT_PHOTO_RESPONSE RESULT="ACK">
   <EPOD_PHOTOS>
     <EPOD_PHOTO>
     ...
      </EPOD_PHOTO>
    </EPOD_PHOTOS>
</EPOD_EXPORT_PHOTO_RESPONSE>
```

Data returned per photo (EPOD_PHOTO):

Name	Description
EPL_SITE_ID	The site ID.
EPL_PHOTO_ID	The unique photo ID.
EPL_DESCRIPTION	The entered description of the photo.
EPL_PHOTO	Base64 JPEG.
EPL_IMAGE_TYPE	The photo type, as above.
EPL_LAST_CHANGED_DATE	Format YYYYMMDD
EPL_LAST_CHANGED_TIME	Format HHMMSSNN
EPL_KEYVAL_1	Load ID for type "L" or "LU", else Job ID for others.
EPL_KEYVAL_2	UDF ID for type "JU", Service ID for type "S", "SI, "SIU", "SPO", "SPR" or "SDU", else Container ID for type "C", "CU", "P" or "PU".
EPL_KEYVAL_3	UDF ID for type "CU", "SIU", "SPO", "SPR" or "SDU", Product ID for type "P" or "PU".
EPL_KEYVAL_4	Product Sequence for type "P" or "PU".
EPL_KEYVAL_5	UDF ID for type "PU".

Sample error response:

```
<EPOD_EXPORT_PHOTO_RESPONSE RESULT="NAK">
  <ERRORS>
    <ERROR error="INVALID VALUE FOR EPL_JOB_ID"></ERROR>
  </ERRORS>
</EPOD_EXPORT_PHOTO_RESPONSE>
```

10.6.3 Flat-file Processing

The FTP server or File-system can be identified by the TMS team, or supplied by OBS Logistics.

Each job will be sent independently, resulting in a single XML file created in the destination folder. The naming of the file is configurable.

No confirmation of processing is required - this is expected to be handled by the host system. Files processed can be deleted or moved to an archive folder, as required by the host system.

11 Appendix A: Document References

A.1 References

Ref No	Document Title & ID	Version	Date
1	UG 291094 EPOD Admin User Guide	4.5.00.05	25/04/2021
2	UG 291097 EPOD Client User Guide	4.0.02.21	02/04/2019
3	EPOD Import Mapping v4.5.00.05.xlsx		26/04/2021
4	EPOD Export Mapping v4.5.00.05.xlsx		26/04/2021
5	Version 4.5.zip		06/11/2020

A.2 Glossary

Term or Acronym	Meaning
General Definitions	
EPOD	Electronic Proof of Delivery. The OBSL EPOD system is *CALIDUS* ePOD. This also comprises the basis of the Service Completion system *CALIDUS* eServ.
Server	The portion of the *CALIDUS* ePOD/eServ systems that controls all the data and sends information to and receives updates from the mobile device.
Mobile Device; PDA	The device used by the driver to perform the jobs. Typically an Android mobile device or tablet.
Site	The site usually defines the depot, business or the transport group (carrier). It can be set to any value required by the customer. All transactions data (for example, loads and jobs) and standing data (for example, vehicles and uses) belong to a site. An EPOD user, on a device or in the Admin screen, can only see data for one site at a time.
Load	A single journey for the driver with a set of work attached. A load is identified by a unique load ID. This may also be referred to as a worklist or workload.
Job	Also Consignment. A single task for the driver as a specific location. This could be the collection of goods or the delivery of goods. Jobs may also be Services (for example, servicing, installing or de-installing a boiler). A job is identified by a unique job ID but can also have other references held against the job (e.g. job code, SO number, customer reference and external reference).
Job Group	Jobs must be tagged with a Job Group. All jobs tagged with a single job group are processed in the same way. The job group has configuration associated to it to control such items as: POD/POC Report settings; Pre-Job actions (such as signing at a gatehouse); Post-Job actions (such as who signs for the item, are photos required); configurable fields required for entry for the jobs; Terms and Conditions displayed and; driver/user process (such as photos required for cancellation, comments/notes allowed). The job group can be used for any or all Sites, and the configuration against the job group can be different in each site. Job Groups can also be restricted from Admin and Remote users, so that certain users only see jobs for certain groups.
Container	A generic term for any object that contains the items being collected or delivered. Examples of containers are: Pallet; Package; Carton; Item; Cage. A special container "Loose Products" - see Product below. A container is identified by a container ID which is unique to this physical container.
Product	A product is any goods that are being collected or delivered where the product has a 'Product Code' which identifies what the product is but which does not uniquely identify each individual item. A product will also have a quantity associated with it to indicate how many items of this 'Product Code' are being collected or delivered. Products can either be processed within a 'Container' or as 'Loose Products' without a 'Container'.
Owner	The owner of the order that created the job. Typically this is the sales team that took the order and will be responsible for dealing with queries from the customer regarding the status.
Operator; Executor	The Site (depot or carrier) that is executing the load or loads that are involved in the delivery of the items.
Item Related Definitions	
Job Code	A reference associated with a job or job(s). This reference is common to connected jobs, for example this would be the same on both the collection of goods and the associated delivery of the same goods. Typically this would be the transport unique reference.
SO Number	A reference associated with a job which indicates the "Sales Order Number" this job is associated with.
Customer Reference	A reference associated with a job which has been provided by and will be recognised by the customer.

Term or Acronym	Meaning
External Reference	A reference associated with a job which does not match any of the existing references, usually because it has been provided by an external system.
Pallet	An alternative for 'Container'. The term pallet is used when the operation only uses portable platforms as the container for goods.
Package	An alternative for 'Container'. The term package is used when the operation only uses boxes or wrapping as containers for goods.
Package Code	A code representing the type of 'Container'.
Package Desc	A description of the type of 'Container'.
Product Code	A code which identifies what a product is.
Item	A generic term for any individual item that can be collected or delivered. An item can represent a 'Container' or a 'Product'. This can also be used as an alternative for 'Container' when the operation only treats the goods as individual items, i.e. not as identifiable products.
Service Item	An item which will be serviced by a service job. See action 'Service'.
Issue Life	The time after which an item is no longer fit for purpose.
Pack Size; Case Quantity	A product may consist of a full quantity of items, inside a pack. The Pack Size (or Case Quantity) defines the amount of this product contained in a single pack. For example, if there are 85 items to deliver, with a pack size of 24, the number of full packs is determined to be 3 (24 * 3, or 72), with the remaining (13) being 'loose' quantity. This is displayed as "3/13" on the mobile application.
UOM; Item Type	Unit of Measure; The major (case) UOM. This can optionally be displayed on the mobile device when changing product quantities.
Product Type	A classification of the product being delivered. For example, a company may deliver 7 different mortar products and 80 different concrete slab products. The Product Types may be set to "MORTAR" and "SLABS". This may be used to attach additional configuration, changing the data required when collecting or delivering these product types.
Status Definitions	
Status	An indicator of how far through the processing a 'Job', 'Container' or 'Product' has progressed.
Pending	A status indicating that the processing has not yet started, but is required to be completed.
In Progress	A status indicating that processing has started but not yet finished.
Complete	A status indicating that the 'Job', 'Container' or 'Product' has been collected or delivered.
Complete (Amended)	A status indicating that the 'Job', 'Container' or 'Product' has been collected or delivered but that some changes or amendments have been made. This means that not everything that was planned to be collected or delivered was collected or delivered, some items may have been cancelled or some products may only have had some of the planned quantities collected or delivered.
Complete (Claused)	A status indicating that the processing has been finished but that a 'Clause' condition has been recorded for this item.
Claused	See 'Complete (Claused)' and action 'Clause'.
Cancelled	A status indicating that the processing of this item or job is no longer required.
Cancelled at Collection	A status indicating that the delivery of a container or product is no longer required because the associated collection of this container or product was cancelled.
Submitted	An optional status that applies only to a 'Job' and which occurs after the 'Job' has been completed. This indicates that any time and expenses information recorded for the 'Job' has been submitted back to the server and can no longer be altered.
Action Definitions	
Start	An action associated with a 'Job' meaning the driver is about to start the processing of this job or jobs. This action will mark the job(s) with a status of 'In Progress'.
Arrive	A conditional action associated with a 'Job' meaning the driver has arrived at the location the goods should be collected from or delivered to.
Continue	An action associated with a 'Job' meaning the driver has previously performed the 'Start' and/or 'Arrive' action and has exited the processing screen but is now going to continue the processing.
Collect	An action associated with a specific 'Container' or a 'Product' meaning the driver has collected the 'Container' or 'Product'. This action will mark the 'Container' or 'Product' with a status of 'Complete' or 'Complete (Amended)'.
Collect Claused	An action associated with a specific 'Container' or a 'Product' meaning the driver has collected the 'Container' or 'Product' but with a condition under which the collection was accepted. This action will accept the clause condition and then mark the 'Container' or 'Product' with a status of 'Complete (Claused)'.

Term or Acronym	Meaning
Deliver	An action associated with a specific 'Container' or a 'Product' meaning the driver has delivered the 'Container' or 'Product'. This action will mark the 'Container' or 'Product' with a status of 'Complete' or 'Complete (Amended)'.
Deliver Claused	An action associated with a specific 'Container' or a 'Product' meaning the driver has delivered the 'Container' or 'Product' but with a condition under which the delivery was accepted. This action will accept the clause condition and then mark the 'Container' or 'Product' with a status of 'Complete (Claused)'.
Clause	An action associated with a specific 'Container' or a 'Product' that has already been collected or delivered meaning the collection or delivery has been accepted with a condition. This action will accept the clause condition and then mark the 'Container' or 'Product' with a status of 'Complete (Claused)'.
Cancel	An action associated with a 'Job', 'Container' or 'Product' meaning the collection or delivery will not be performed for this 'Job', 'Container' or 'Product'.
Submit	An optional action which can conditionally be carried out after a 'Job' has been collection or delivered meaning that any/all required expense or time recording for this 'Job' has been completed and can be submitted back to the server.
Service	A service of a service item or items. Typically, Installation, Deinstallation or Service. The process of a service usually encompasses Pre- and Port-work checks, information gathering and diagnosis and resolution notes. Additional references (MC Refs) may also be captured.
Actioned	A general term describing completing a job. So, 'Actioned' may be used instead of 'Collected', 'Serviced', 'Delivered'.
Consolidate	The action of taking several jobs and linking them together, so they are actioned at the same time with one start, arrive and signature.
Deconsolidate	The action of taking a consolidation of jobs and breaking them down into the component jobs again.
Job Swap	The action of selecting an existing load not assigned to the user, and picking jobs to transfer onto the user's load.
Signature Capture	Usually the final action of a job, where the customer's name and signature are entered.
Other Definitions	
Reason Code	A code which represents the reason that a job was cancelled or an item was cancelled or claused.
Vehicle	The vehicle used for transporting the goods.
Vehicle Checks	Also Defect Checks. A series of questions representing the results of checks intended to ensure the vehicle is in an acceptable condition.
Metrics Entry	A series of questions to capture information either at the start or end of a 'Load'.
Driver	The person performing the collections or deliveries; the user of the device/application.
Engineer	The person performing the services; the user of the device/application.
Customer	The person/company the goods are being collected from or delivered to.
Signatory	The name of the person providing a signature.
T&Cs	Terms and Conditions. The T&Cs are shown when signatures are prompted for. The text of the T&Cs are defined in the system itself.
Transfer Load	A load select from which to swap jobs to the user's load.
Base	E.g. 'Return to Base'. Typically the depot from which the driver departed.
Unplanned Ad Hoc Collection	A collection job that is created by the driver, usually after delivering to a customer.
Ad Hoc Container Entry/Scanning	The process of adding containers (items) to a job that have not been pre-advised on the job.
Completion Report	POD, POC, Service/Work Report.
Load Assignment	The action of assigning a vehicle and/or a driver to a load.
Job Assignment	The action of putting jobs onto a load.
Collection/Delivery Windows; Access Windows	Periods of time between which it is acceptable to deliver or collect from that customer. This has limited use in the system, mostly for reporting purposes.
Location/Map Terms	
Lat-Longs; GPS Co-ordinates, GPS Position	Latitude and Longitude co-ordinates, specified together as a single entity, identifying the exact position of a location. There are multiple formats - *CALIDUS* ePOD uses decimal notation, for example "53.3490818,-2.8521498" identifies the OBS Logistics office building in Liverpool.
GPS	

Term or Acronym	Meaning
	Global Positioning System; the satellite system used to obtain a GPS position, for use with navigation and location positioning.
Geocode; Reverse Geocode	Geocoding is the process of obtaining lat-longs from an address. Reverse Geocoding is the process obtaining an address from lat-longs.
Geofence; Geofence Break	A Geofence is a perimeter around a location. A Geofence Break occurs when a device passes through this perimeter on entry or exit from the location.

A.3 Authorised By

Murray Middleton	OBS Project Manager	_____
Tony Walker	OBS Consultant	_____

12 Category:UG 291094 EPOD Admin User Guide

This is the *CALIDUS* ePOD/eServ Admin User Guide.

This can be exported as a PDF document from the toolbox menu.

The first page for reference is Admin User Guide.

Ready for **What's Next, Now**™

13 Category:UG 291097 EPOD Advanced Guide

Pages in this category comprise advanced information around several areas of the *CALIDUS* ePOD system, both within the Admin and Device applications.

This guide can be exported as a PDF document from the toolbox menu.

Ready for **What's Next, Now**™

14 Category:UG 291097 EPOD Client User Guide

This is the *CALIDUS* EPOD Client User Guide.

This can be exported as a PDF document from the toolbox menu.

The first page for reference is EPOD Client User Guide.

Ready for **What's Next, Now**™

15 Category:WI 287575 EPOD Development and Release Process

These pages are all relating to Development, Installation and Release processes for all parts of the EPOD system.

A PDF document can be saved by clicking the *Print as PDF* tab in the tab bar, typically on the top of the screen.