

Aptean Proof of Delivery - Calidus Edition

CALIDUS ePOD/eSERV Interfaces

CALIDUS ePOD

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Contents

1 Fi	Functional Overview	
	1.1 Solution Overview	1
	1.2 Scope	
2 Fi	Functional Description	2
211	2.1 Import Message Content	
	2.2 Mechanism for Sending Import Files to Web Services	4 1 <i>E</i>
	2.2 Mechanism for Sending Import Files to Web Services	
	2.3 Processing Responses through Web Services	17
	2.4 Export Process	19
	2.5 Export Message Content	19
	2.6 Export Mechanisms	26
	·	
3 A	Appendix A: Document References	35

1 Functional Overview

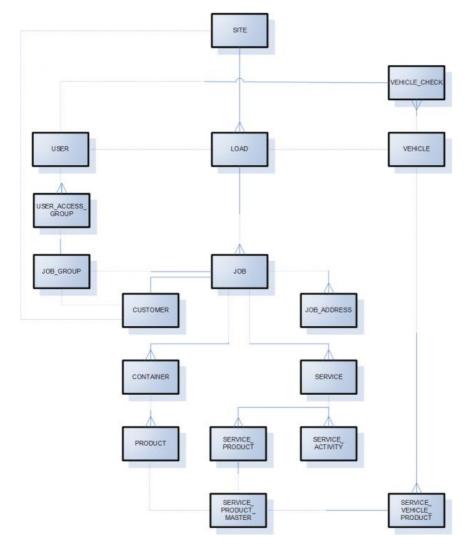
The document is intended to describe the basic requirements for interfacing to and from the *CALIDUS* ePOD system, with respect to the main *CALIDUS* ePOD tables.

1.1 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:



- 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 '0000000000000', so that the table data structure is preserved.

1.2 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.



2 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.

2.1 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 <i>not</i> 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	The operation will be the control of
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.
	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.
EPL_CONTAINER_ONLY	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:

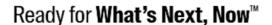
```
<EPOD_IMPORT EPL_SITE_ID="TEST" EPL_USER_ID="ADM" EPL_USER_PASSWORD="TEST">
 <EPOD LOADS>
   <EPOD_LOAD>
     <EPL_SITE_ID>TEST</EPL_SITE_ID>
     <EPL_LOAD_ID>TEST001</EPL_LOAD_ID>
     <EPL_LOAD_START_PLANNED_DATE>20120320</EPL_LOAD_START_PLANNED_DATE>
     <EPL_LOAD_START_PLANNED_TIME>16450000/EPL_LOAD_START_PLANNED_TIME>
     <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>0000000
         <EPL_END_PLANNED_DATE>20120320</EPL_END_PLANNED_DATE>
         <EPL_END_PLANNED_TIME>0000000
         <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_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_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_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_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>
  <POD CONTAINER>
    <EPL_SITE_ID>TEST</EPL_SITE_ID>
    <EPL_JOB_ID>TEST001001
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   <EPL_SEQUENCE>0001</EPL_SEQUENCE>
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   <EPL_CONTAINER_PACKAGE_DESC>Test Container/EPL_CONTAINER_PACKAGE_DESC>
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      <EPOD_PRODUCT>
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       <EPL_JOB_ID>TEST001001</EPL_JOB_ID>
        <EPL_CONTAINER_ID>TEST001001-02/EPL_CONTAINER_ID>
       <EPL_PRODUCT_CODE>TESTPROD1
       <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>
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</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.

2.2 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"</pre>
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"</pre>
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 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"</pre>
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"</pre>
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"</pre>
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"</pre>
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"</pre>
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"</pre>
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>
```

2.3 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.

 ${f Q}$ **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'.</pre>
                      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>
        </RESILT>
        <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>
            <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>
            <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>
            <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>
```



2.4 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.

2.5 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
	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
	This is setup within the Admin system. Each job group has its own settings and will
EPL_JOB_GROUP	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	Description
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 '00000000000000' holding these products.	
If the job is a Service, this object contains a series of EPOD_SERVICE objects holding all the service-related information for each service item. In that case, n 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	
	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:



```
<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_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>
      <PPOD CONTAINERS>
       <EPOD CONTAINER>
         <EPL_SITE_ID>L03</EPL_SITE_ID>
          <EPL_JOB_ID>000000001/EPL_JOB_ID>
         <EPL_CONTAINER_ID>000000000001
         <EPL_SEQUENCE>0</EPL_SEQUENCE>
         <EPL_CONTAINER_PACKAGE_CODE>XX</EPL_CONTAINER_PACKAGE_CODE>
         <EPL_CONTAINER_PACKAGE_DESC>Pallet/
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.



2.5.1 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>
                   <TTEMS>
                       <TTEM ANSWER="Y">Oil Level</ITEM>
                       <ITEM ANSWER="Y">Tyres</ITEM>
                       <ITEM ANSWER="Y">Brakes</ITEM>
                       <TTEM ANSWER="Y">Water</ITEM>
                       <ITEM ANSWER="Y">Lights</ITEM>
                   </ITEMS>
               </OUESTION>
               <QUESTION ID="0002">
                   <TEXT>Please enter any comments.</TEXT>
                   <FORMAT>T</FORMAT>
                   <SKIPABLE>Y</SKIPABLE>
                   <ANSWER>na</ANSWER>
               </QUESTION>
               <OUESTION 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>
```

2.5.2 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:

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

2.5.3 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.

2.6 Export Mechanisms



2.6.1 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.

2.6.2 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.

2.6.2.1 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:

The web service will respond as follows:

Load found:



```
</EPOD_EXPORT_LOAD_RESPONSE>
```

Errors:

2.6.2.2 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:

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

Load found:

Errors:

2.6.2.3 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:

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

Load found:

Errors:

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



2.6.2.4 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:

Job Found:

Errors:

2.6.2.5 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:

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

Jobs found:

Errors:



2.6.2.6 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:

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

Jobs found:

Errors:

2.6.2.7 EPOD XML EXPORT REPORT

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

 \P 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	Υ	Values "PLANNED" or "ACTUAL".
Date From	DATE_FROM	Υ	Format "DD/MM/YYYY".
Date To	DATE_TO	Υ	Format "DD/MM/YYYY".
Customer Code	EPL_CUSTOMER_CODE	Ν	
Load ID	EPL_LOAD_ID	Ν	
Route Code	EPL_ROUTE_CODE	N	

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

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:

2.6.2.8 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:

2.6.2.9 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></EPOD_EXPORT_VEHICLECHECKS>
```

Checks found:

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.	
	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:

2.6.2.10 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.		
	Can select container by container ID from specified job - returns all container-level photos for that container.		
	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.		
	 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".
EPL PHOTO ID	Note: Photo Type MUST be specified if retrieving Container, Product, Service or UDF photos. Can select photo by photo ID - returns that photo.
EPL UDF ID	Can filter photos returned by UDF ID.
}	Carriller protos returned by ODF ID.

A sample response, when a photo is found:

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:

2.6.3 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.



3 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 <i>CALIDUS</i> ePOD. This also comprises the basis of the Service Completion system <i>CALIDUS</i> 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 Definition	ns	
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	The second secon		
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		
Deliver Claused	Complete' or 'Complete (Amended)'. 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	A color 12 to second the consequents that a 2 to second the top of the consequents the consequents the consequents the consequents to the consequents the consequents the consequents to the consequents the consequents the consequents the consequence of the cons		
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 - <i>CALIDUS</i> 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	

