**ULIP Integration Requirement Document**

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Project Name: ULIP

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Revision History

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Table of Contents

[Introduction 4](#_Toc77856527)

[1.1 Purpose 4](#_Toc77856528)

[The Overall Description 4](#_Toc77856529)

[1.2 Data Integration between COPT System and ULIP application 4](#_Toc77856530)

[1.3 COPT/01 5](#_Toc77856531)

[1.3.1 Technical Approach 5](#_Toc77856532)

[1.4 COPT/02 7](#_Toc77856533)

[1.4.1 Technical Approach 8](#_Toc77856534)

[1.5 COPT/03 11](#_Toc77856535)

[1.5.1 Technical Approach 11](#_Toc77856536)

[1.6 Data Transmission & Authentication Mechanism 14](#_Toc77856537)

# 

# Introduction

## Purpose

The purpose of this document is to define and provide details for accessing API for Vessel Import export information using VCN number, be number, Shipping bill number from ULIP system.

This document details the following points:

1. **Data Integration between COPT and ULIP web service**: Identification of operational points where data integration between COPT and ULIP web service will be needed.
2. **Technical Approach** for performing Data Integration

# The Overall Description

User will share the information such as **VCN number, BE number** and **shipping bill number** based on data send by user ULIP system will call respective **COPT** API for accessing information.

Following are the point for accessing vessel information: -

1. This API will share vessel information and import and export data based on information provided by user.
2. ULIP will expose API for getting data from COPT API.
3. **COPT/01** API will take VCN Number from user and get data from COPT API.
4. **COPT/02** API will take BE number from user and get import data from COPT API.
5. **COPT/03** API will take shipping bill number from user and get export data from COPT API.

## Data Integration **between** COPT System and ULIP application

User will share information to ULIP system based on data shared ULIP will provide data to user.

## COPT/01

This API will take VCN number and connect with COPT API to get data.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S. No.** | **Field Name** | **Field Description** | **Format** | **Required/Not – Required** | **Length** |
| 1 | **vcnNo** | This field will have the value of vessel number | ^[a-zA-Z0-9]{2,14}$ | Required | 14 |

### Technical Approach

1. All the data will be shared through rest web services.
2. ULIP system will provide **vcn number** for which detail is required.
3. We have to send secret key with header.
4. COPT API will share details of vcn number information which exist in COPT system in encrypted text (in JSON “ResponseBody” key). COPT integration will then decrypt the encrypted text to get JSON.
5. COPT Integration will add JSON in **response** key in response body.
6. ULIP system will provide the data in JSON Object format in response body.

**Example:**

VCN Number **INCOK120100101** is shared by ULIP system, then COPT-integration will make a request to COPT API.

**Request:**

The request must be of the following format, where vcn number is passed within the URL parameters in JSON format.

[**https://www.ulip.dpiit.gov.in/ulip/v1.0.0/COPT/01**](https://www.ulip.dpiit.gov.in/ulip/v1.0.0/COPT/01)

**Curl URL**

curl -X POST \  
https://www.ulip.dpiit.gov.in/ulip/v1.0.0/COPT/01 \  
 -H 'accept: application/json' \  
 -H 'authorization: Bearer eyJhbGciOiJIUzUxMiJ9.eyJzdWIiOiJ0ZXN0MSIsImlhdCI6MTYyNzY0MzM3OCwiYXBwcyI6ImRhdGFwdXNoIn0.WxGr7t4xCbVVJuSNmrC8zZxzE8r5z8f66QGov2j411oaW8bIP8SZNSaLcoLReKY2F\_MFDXfOWAf\_NiYMmdLP8g' \  
 -H 'cache-control: no-cache' \  
 -H 'content-type: application/json' \  
 -H 'postman-token: f2c362d5-24fd-33b2-f483-c72acb19fae0' \  
 -d '{"vcnNo": "INCOK120100101"}'

For obtaining secret key, refer Section 1.6

**Response**

To acknowledge the above request, ULIP will send the below response -

1. **In case of invalid format**
2. **Invalid vcn number**

{  
 "response": null,  
 "error": "true",  
 "code": "400",  
 "message": "Data format failed OR wrong value entered at: vcnNo. Format should follow ^[a-zA-Z0-9]{2,14}$"  
}

1. **In case of vcn number not exist in COPT system**

{

"response": [

{

"responseStatus": "FAILURE"

}

],

"error": "false",

"code": "200",

"message": "Success"

}

1. **In case vcn number exist**

{  
 "response": [  
 {  
 "response": {  
 "Vessel\_Name": "PANTARISTE",  
 "Application\_Type": "1",  
 "Ata": "28102020 03:10",  
 "Atd": "30102020 04:10",  
 "Last\_Port\_of\_Call\_Name": "SINGAPORE",  
 "Eta": "28102020 06:10",  
 "Etd": "29102020 11:10",  
 "Vessel\_Type": "1531",  
 "Vcn\_No": "INCOK120100101",  
 "Imo\_Number": "9233739",  
 "Port\_Of\_Arrival\_Name": "RIO DE JANEIRO",  
 "Shipping\_line\_Code": "1001860",  
 "Shipping\_agent\_Code": null  
 },  
 "responseStatus": "SUCCESS"  
 }  
],  
 "error": "false",  
 "code": "200",  
 "message": "Success"  
}

**Status Code 200**: vessel data response

**Status Code 400**: Bad request (Invalid json syntax, invalid json key)

**Status Code 401 or 403**: Unauthenticated or Unauthorized

**Status Code 500**: Some internal server error occurred

**Status Code 502**: Server is not responding.

## COPT/02

This API will take be number and connect with COPT API to get data.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S. No.** | **Field Name** | **Field Description** | **Format** | **Required/Not – Required** | **Length** |
| 1 | **beNo** | This field will have the value of be number | [0-9]{7} | Required | 7 |

### Technical Approach

1. All the data will be shared through rest web services.
2. ULIP system will provide **be number** for which detail is required.
3. We have to send secret key with header.
4. COPT API will share details of **be number** information which exist in COPT system in encrypted text (in JSON “ResponseBody” key). COPT integration will then decrypt the encrypted text to get JSON.
5. COPT Integration will add JSON in **response** key in response body.
6. ULIP system will provide the data in JSON Object format in response body.

**Example:**

be Number 6603661 is shared by ULIP system, then COPT-integration will make a request to COPT API.

**Request:**

The request must be of the following format, where be number is passed within the URL parameters in JSON format.

[**https://www.ulip.dpiit.gov.in/ulip/v1.0.0/COPT/02**](https://www.ulip.dpiit.gov.in/ulip/v1.0.0/COPT/02)

**Curl URL**

curl -X POST \  
https://www.ulip.dpiit.gov.in/ulip/v1.0.0/COPT/02 \  
 -H 'accept: application/json' \  
 -H 'authorization: Bearer eyJhbGciOiJIUzUxMiJ9.eyJzdWIiOiJ0ZXN0MSIsImlhdCI6MTYyNzY0MzM3OCwiYXBwcyI6ImRhdGFwdXNoIn0.WxGr7t4xCbVVJuSNmrC8zZxzE8r5z8f66QGov2j411oaW8bIP8SZNSaLcoLReKY2F\_MFDXfOWAf\_NiYMmdLP8g' \  
 -H 'cache-control: no-cache' \  
 -H 'content-type: application/json' \  
 -H 'postman-token: 0309a238-48f4-4de0-63ae-6fbbccb5a360' \  
 -d '{"beNo": "6603661"}'

For obtaining secret key, refer [Section 1.6](#_Data_Transmission_&)

**Response**

To acknowledge the above request, ULIP will send the below response -

1. **In case of invalid format**
2. **Invalid be number**

{

"response": null,

"error": "true",

"code": "400",

"message": "Data format failed OR wrong value entered at: beNo. Format should follow [0-9]{7}"

}

1. **In case of be number not exist in COPT system**

{

"response": [

{

"response": "\"Please contact administrator\"",

"responseStatus": "ERROR"

}

],

"error": "false",

"code": "200",

"message": "Success"

}

1. **In case be number exist**

{  
 "response": [  
 {  
 "response": {  
 "bl\_no": "FAR6650028-1-0",  
 "no\_of\_packages\_qty": "84",  
 "goods\_description": "MATERIALS UNDER SUPPLEMENTS 1935612230737 OF 16.08.2019 AND 1935612231087 OF 21.08.2019 TO GENERAL CONTRACT NO.P135612230930 OF 23.06.2011",  
 "out\_of\_charge\_no": "2036532674",  
 "cargo\_type": "MMPS",  
 "importer\_name": "1002101",  
 "delivery\_order\_no": "DO2000005",  
 "be\_date": null,  
 "mode\_of\_transport": "R",  
 "out\_of\_charge\_date": "03022020",  
 "unit\_of\_measurement": "MT",  
 "type\_of\_packages": "PIECES",  
 "nature\_of\_cargo": "P",  
 "surveyor\_code": null,  
 "vehicle\_info": [],  
 "do\_date": "03022020",  
 "marks\_no": "NIL",  
 "line\_no": "1",  
 "importer\_address": null,  
 "country\_of\_origin": "RULED-ST PETERSBURG (EX LENINGRAD)",  
 "be\_no": "6603661",  
 "sub\_line\_no": "0",  
 "igm\_date": "22012020",  
 "survey\_date": null,  
 "igm\_no": "2244915",  
 "cha\_code": "1002101"  
 },  
 "responseStatus": "SUCCESS"  
 }  
],  
 "error": "false",  
 "code": "200",  
 "message": "Success"  
}

**Status Code 200**: cargo data response

**Status Code 400**: Bad request (Invalid json syntax, invalid json key)

**Status Code 401 or 403**: Unauthenticated or Unauthorized

**Status Code 500**: Some internal server error occurred

**Status Code 502**: Server is not responding.

## COPT/03

This API will take shipping bill number and connect with COPT API to get data.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S. No.** | **Field Name** | **Field Description** | **Format** | **Required/Not – Required** | **Length** |
| 1 | **Shipping\_bill\_no** | This field will have the value of shipping bill number | [0-9]{7} | Required | 7 |

### Technical Approach

1. All the data will be shared through rest web services.
2. ULIP system will provide **shipping bill number** for which detail is required.
3. We have to send secret key with header.
4. COPT Integration will add JSON in **response** key in response body.
5. COPT API will share details of **be number** information which exist in COPT system in encrypted text (in JSON “ResponseBody” key). COPT integration will then decrypt the encrypted text to get JSON.
6. ULIP system will provide the data in JSON Object format in response body.

**Example:**

Shipping bill Number **5323322** is shared by ULIP system, then COPT-integration will make a request to COPT API.

**Request:**

The request must be of the following format, where shipping bill number is passed within the URL parameters in JSON format.

[**https://www.ulip.dpiit.gov.in/ulip/v1.0.0/COPT/03**](https://www.ulip.dpiit.gov.in/ulip/v1.0.0/COPT/03)

**Curl URL**

curl -X POST \  
https://www.ulip.dpiit.gov.in/ulip/v1.0.0/COPT/03 \  
 -H 'accept: application/json' \  
 -H 'authorization: Bearer eyJhbGciOiJIUzUxMiJ9.eyJzdWIiOiJ0ZXN0MSIsImlhdCI6MTYyNzY0MzM3OCwiYXBwcyI6ImRhdGFwdXNoIn0.WxGr7t4xCbVVJuSNmrC8zZxzE8r5z8f66QGov2j411oaW8bIP8SZNSaLcoLReKY2F\_MFDXfOWAf\_NiYMmdLP8g' \  
 -H 'cache-control: no-cache' \  
 -H 'content-type: application/json' \  
 -H 'postman-token: 3ada4541-6463-4c8d-743a-d7bf26cda9c1' \  
 -d '{"shippingBillNo": "5323322"}'

For obtaining secret key, refer Section 1.6

**Response**

To acknowledge the above request, ULIP will send the below response -

1. **In case of invalid format**
2. **Invalid shipping bill number**

{  
 "response": null,  
 "error": "true",  
 "code": "400",  
 "message": "Data format failed OR wrong value entered at: shippingBillNo. Format should follow [0-9]{7}"  
}

1. **In case of shipping bill number not exist in COPT system**

{

"response": [

{

"response": "\"Please contact administrator\"",

"responseStatus": "ERROR"

}

],

"error": "false",

"code": "200",

"message": "Success"

}

1. **In case shipping bill number exist**

{  
 "response": [  
 {  
 "response": {  
 "egm\_date": "21092020",  
 "egm\_no": "EA202000135",  
 "exporter\_name": "3001170-SARASWATHY METAL INDUSTRIES",  
 "port\_where\_sb\_filed": null,  
 "port\_of\_loading": null,  
 "cargo\_type": "MMPS-METALS & METAL PRODUCTS",  
 "rotation\_date": "09092020",  
 "allow\_for\_shipment\_date": "21092020",  
 "leo\_date": "21092020",  
 "rotation\_no": "203448",  
 "shipping\_bill\_date": "21092020",  
 "port\_of\_origin": null,  
 "shipping\_bill\_no": "5323322",  
 "vcn\_no": "INCOK120090071",  
 "nature\_of\_cargo": "P",  
 "port\_of\_destination\_code": null,  
 "vehicle\_info": [  
 {  
 "truck\_entry\_permit\_no": "GP2000131",  
 "truck\_exit\_time": "22092020",  
 "vehicle\_number": "KL43C6141",  
 "truck\_entry\_time": "22092020"  
 }  
 ]  
 },  
 "responseStatus": "SUCCESS"  
 }  
],  
 "error": "false",  
 "code": "200",  
 "message": "Success"  
}

**Status Code 200**: cargo data response

**Status Code 400**: Bad request (Invalid json syntax, invalid json key)

**Status Code 401 or 403**: Unauthenticated or Unauthorized

**Status Code 500**: Some internal server error occurred

**Status Code 502**: Server is not responding.

## Data Transmission & Authentication Mechanism

All data exchange would be done over secure HTTP (HTTPS). Request from ULIP's system would be made in MPT system through a data exchange URL that has following form:

<https://www.ulip.dpiit.gov.in/ulip/v1.0.0/COPT/01>

**Body:**

{"vcnNo": "1234567890122"}

Access to above data exchange URL would be authorized by use of a security mechanism implemented by the ULIP system. It is as follows:

* First time access: It would require a username and password [which would be shared with user beforehand]. Once user hit with valid user id and password, ULIP system will return a basic authorization token to user, using that token user will communicate with ULIP system until token will not get expired.

Brief summary of HTTP Basic Authentication is as follows:

First time when User will hit ULIP secured API through username and password for access token as follow-

***curl -X POST***

‘https://www.ulip.dpiit.gov.in/ulip/v1.0.0/user/login’

***-H 'accept: application/json'***

***-H 'content-type: application/json'***

***-data ‘{"username":"xxxxxx","password":" XXxxx@12345"} ‘***

**Authorization:**

***Bearer eyJhbGciOiJIUzUxMiJ9.eyJzdWIiOiJpbnRlcmNvbnQiLCJpYXQiOjE1ODU1NjYyMzcsImFwcHMiOiJkYXRhcHVzaCJ9.jb-23DbkWpz-3ptsuuZofzH-ce7jd0xR5WlkFfBPO\_Dzjop01dSx9OamqsjsgUAryLUPtUDiMX07oHG4L2AfFQ***

Upon successful authentication, the user would be logged into the ULIP system and get an access token. Though this token user can communicate with ULIP. This token has expiry time which represent user session. The session time out for the same to be fixed hour, generally it is for 30 minutes. If there is no request coming from user for 30 minutes, then session (token) will be expired and user need to re authenticate.

Using The above token, user can request ULIP system for vehicle details as follow -

***curl -X POST \***

[***https://www.ulip.dpiit.gov.in/ulip/v1.0.0/COPT/01***](https://www.ldbstaging.co.in/ulip/v1.0.0/COPT/01) ***\***

***-H 'accept: application/json' \***

***-H 'authorization: Bearer eyJhbGciOiJIUzUxMiJ9.eyJzdWIiOiJ0ZXN0MSIsImlhdCI6MTYyNTIzMDQyNywiYXBwcyI6ImRhdGFwdXNoIn0.rhumwWJ8BWeeHe9CYmIV1UKyJk-kLHA\_ovX5Zi2OwxEv-td-KpxnfbKDI\_8FZsOoggqx3Al-Du1y2qMoUD7uzA' \***

***-H 'cache-control: no-cache' \***

***-H 'content-type: application/json' \***

***-H 'postman-token: 8e8a19a4-ea1e-6373-f616-e2e4af9a1338' \***

***-d '{"vcnNo": "1234567890122"}'***