**ULIP Integration Requirement Document**

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Project Name: ULIP

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# 

# Introduction

## Purpose

The purpose of this document is to define and provide details for accessing API for MPT system information (information about vessel and cargo available in MPT system) from ULIP system.

This document details the following points:

1. **Data Integration between MPT and ULIP web service**: Identification of operational points where data integration between MPT 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 **MPT** API for accessing information.

Following are the point for accessing vehicle information: -

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

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

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

## MPT/01

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S. No.** | **Field Name** | **Field Description** | **Format** | **Required/Not – Required** | **Length** |
| 1 | **vcnNo** | vessel call number as available in MPT system. | ^[a-zA-Z0-9]{2,14}$ | Required | Min 2  Max 12 |

### 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. MPT API will share details of vessel information which exist in MPT system in JSON format.
4. MPT Integration will add JSON in **response** key in response body.
5. ULIP system will provide the data in JSON Object format in response body.

**Example:**

VCN number **20200345** is shared by ULIP system, then MPT-integration will make a request to MPT API.

**Request:**

The request must be of the following format, where driving license number and date of birth is passed within the URL body in JSON format.

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

{"vcnNo": "123456789012"}

**Curl URL**

curl -X POST \

https://www.ulip.dpiit.gov.in/ulip/v1.0.0/MPT/01 \

-H 'accept: application/json' \

-H 'authorization: Bearer eyJhbGciOiJIUzUxMiJ9.eyJzdWIiOiJ0ZXN0MSIsImlhdCI6MTYyNTczMzQ0NCwiYXBwcyI6ImRhdGFwdXNoIn0.-FTXGNLmro8bXz45XsfCWkz05u4fdnxpIYXK7HZ7ufbAtbXejm0rsYiv8rzjiUr0bjg1TAxp6vb838uxtet63g' \

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

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

-H 'postman-token: 62dad653-e293-dbff-983e-388f64ae1cd8' \

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

For obtaining authentication token, 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 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 does not exist in MPT system**

{

"response": [

{

"response": {

"IMO\_NUMBER": "",

"APPLICATION\_TYPE": "",

"VCN\_NO": "",

"SHIPPING\_AGENT\_CODE": "",

"ATA": "00000000 00:00",

"ATD": "00000000 00:00",

"PORT\_OF\_ARRIVAL\_NAME": "INMRM1",

"VESSEL\_TYPE": "",

"ETA": "00000000 00:00",

"ETD": "00000000 00:00",

"LAST\_PORT\_OF\_CALL\_NAME": "",

"VESSEL\_NAME": "",

"SHIPPING\_LINE\_CODE": ""

},

"responseStatus": "SUCCESS"

}

],

"error": "false",

"code": "200",

"message": "Success" }

1. **In case vcn number exist**

{

"response": [

{

"response": {

"IMO\_NUMBER": "9728186",

"APPLICATION\_TYPE": "",

"VCN\_NO": "000020200345",

"SHIPPING\_AGENT\_CODE": "",

"ATA": "00000000 00:00",

"ATD": "00000000 00:00",

"PORT\_OF\_ARRIVAL\_NAME": "INMRM1",

"VESSEL\_TYPE": "",

"ETA": "00000000 00:00",

"ETD": "00000000 00:00",

"LAST\_PORT\_OF\_CALL\_NAME": "",

"VESSEL\_NAME": "MEDI GLADSTONE",

"SHIPPING\_LINE\_CODE": ""

},

"responseStatus": "SUCCESS"

}

],

"error": "false",

"code": "200",

"message": "Success"

}

**Status Code 200**: vehicle 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.

## MPT/02

This API will take **BE number** and connect with MPT API to get data.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S. No.** | **Field Name** | **Field Description** | **Format** | **Required/Not – Required** | **Length** |
| 1 | **beNo** | Bill of Entry Number as available in MPT system. | [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. MPT API will share details of cargo information which exist in MPT system in JSON format.
4. MPT Integration will add JSON in **response** key in response body.
5. ULIP system will provide the data in JSON Object format in response body.

**Example:**

BE number **2458667** is shared by ULIP system, then MPT-integration will make a request to MPT API.

**Request:**

The request must be of the following format, where driving license number and date of birth is passed within the URL body in JSON format.

<https://www.ulip.dpiit.gov.in/ulip/v1.0.0/MPT/02>

{"beNo": " 2458667"}

**Curl URL**

curl -X POST \

https://www.ulip.dpiit.gov.in/ulip/v1.0.0/MPT/02 \

-H 'accept: application/json' \

-H 'authorization: Bearer eyJhbGciOiJIUzUxMiJ9.eyJzdWIiOiJ0ZXN0MSIsImlhdCI6MTYyNTczMzQ0NCwiYXBwcyI6ImRhdGFwdXNoIn0.-FTXGNLmro8bXz45XsfCWkz05u4fdnxpIYXK7HZ7ufbAtbXejm0rsYiv8rzjiUr0bjg1TAxp6vb838uxtet63g' \

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

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

-H 'postman-token: d0fa9f41-ec93-2b83-9b90-754b6ad24395' \

-d '{"beNo": "2458667"}'

For obtaining authentication token, 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 does not exist in MPT system**

{

"response": [

{

"response": {

"DELIVERY\_ORDER\_NO": "",

"IMPORTER\_NAME": "",

"IGM\_NO": "",

"BL\_NO": "",

"SURVEY\_DATE": "",

"IMPORTER\_ADDRESS": "",

"SUB\_LINE\_NO": "",

"SURVEYOR\_CODE": "",

"BE\_DATE": "",

"MARKS\_NO": "",

"VEHICLE\_INFO": [],

"CHA\_CODE": "",

"COUNTRY\_OF\_ORIGIN": "",

"IGM\_DATE": "",

"DO\_DATE": "",

"TYPE\_OF\_PACKAGES": "",

"CARGO\_TYPE": "",

"NO\_OF\_PACKAGES\_QTY": "",

"UNIT\_OF\_MEASUREMENT": "",

"LINE\_NO": "",

"GOODS\_DESCRIPTION": "",

"MODE\_OF\_TRANSPORT": "",

"OUT\_OF\_CHARGE\_NO": "",

"NATURE\_OF\_CARGO": "",

"OUT\_OF\_CHARGE\_DATE": "",

"BE\_NO": ""

},

"responseStatus": "SUCCESS"

}

],

"error": "false",

"code": "200",

"message": "Success"

}

1. **In case vcn number exist**

{

"response": [

{

"response": {

"DELIVERY\_ORDER\_NO": "",

"IMPORTER\_NAME": "DECCAN FINE CHEMICALS (INDIA) PRIVATE LIMITED",

"IGM\_NO": "2219622",

"BL\_NO": "579859849",

"SURVEY\_DATE": "",

"IMPORTER\_ADDRESS": "100 PERCENT EOU SANTA MONICA WORKS ,IIHAS",

"SUB\_LINE\_NO": "0",

"SURVEYOR\_CODE": "",

"BE\_DATE": "18032019",

"MARKS\_NO": "NM",

"VEHICLE\_INFO": [

{

"TRUCK\_ENTRY\_PERMINT\_NO": "",

"VEHICLE\_NUMBER": "GA 06 T 3272",

"TRUCK\_EXIT\_TIME": "19032019",

"TRUCK\_ENTRY\_TIME": ""

},

{

"TRUCK\_ENTRY\_PERMINT\_NO": "",

"VEHICLE\_NUMBER": "GA 06 T 4953",

"TRUCK\_EXIT\_TIME": "19032019",

"TRUCK\_ENTRY\_TIME": ""

},

{

"TRUCK\_ENTRY\_PERMINT\_NO": "",

"VEHICLE\_NUMBER": "GA 06 T 3271",

"TRUCK\_EXIT\_TIME": "19032019",

"TRUCK\_ENTRY\_TIME": ""

}

],

"CHA\_CODE": "AACFJ1077GCH001",

"COUNTRY\_OF\_ORIGIN": "CN",

"IGM\_DATE": "15032019",

"DO\_DATE": "",

"TYPE\_OF\_PACKAGES": "CON",

"CARGO\_TYPE": "",

"NO\_OF\_PACKAGES\_QTY": "3",

"UNIT\_OF\_MEASUREMENT": "KGS",

"LINE\_NO": "18",

"GOODS\_DESCRIPTION": "DIMETHYLCARBONATE",

"MODE\_OF\_TRANSPORT": "R",

"OUT\_OF\_CHARGE\_NO": "2032294737",

"NATURE\_OF\_CARGO": "C",

"OUT\_OF\_CHARGE\_DATE": "19032019",

"BE\_NO": "2458667"

},

"responseStatus": "SUCCESS"

}

],

"error": "false",

"code": "200",

"message": "Success"

}

**Status Code 200**: vehicle 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.

## MPT/03

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S. No.** | **Field Name** | **Field Description** | **Format** | **Required/Not – Required** | **Length** |
| 1 | **shppingBillNo** | Shipping Bill number as available in MPT system. | [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. MPT API will share details of cargo information which exist in MPT system in JSON format.
4. MPT Integration will add JSON in **response** key in response body.
5. ULIP system will provide the data in JSON Object format in response body.

**Example:**

Shipping Bill number **4164154** is shared by ULIP system, then MPT-integration will make a request to MPT API.

**Request:**

The request must be of the following format, where driving license number and date of birth is passed within the URL body in JSON format.

<https://www.ulip.dpiit.gov.in/ulip/v1.0.0/MPT/03>

{"shippingBillNo": "4164154"}

**Curl URL**

curl -X POST \

https://www.ulip.dpiit.gov.in/ulip/v1.0.0/MPT/03 \

-H 'accept: application/json' \

-H 'authorization: Bearer eyJhbGciOiJIUzUxMiJ9.eyJzdWIiOiJ0ZXN0MSIsImlhdCI6MTYyNTczMzQ0NCwiYXBwcyI6ImRhdGFwdXNoIn0.-FTXGNLmro8bXz45XsfCWkz05u4fdnxpIYXK7HZ7ufbAtbXejm0rsYiv8rzjiUr0bjg1TAxp6vb838uxtet63g' \

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

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

-H 'postman-token: 74f68893-0e56-f20f-8581-827680413bb4' \

-d '{"shippingBillNo": "4164154"}

'

For obtaining authentication token, 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 shipping bill 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 shipping bill number does not exist in MPT system**

{

"response": [

{

"response": {

"SHIPPING\_BILL\_DATE": "00000000",

"VEHICLE\_INFO": [],

"EXPORTER\_NAME": "",

"ROTATION\_NO": "",

"LEO\_DATE": "00000000",

"EGM\_DATE": "",

"ROTATION\_DATE": "",

"VCN\_NO": "",

"ALLOW\_FOR\_SHIPMENT\_DATE": "",

"PORT\_OF\_ORIGIN": "",

"PORT\_WHERE\_SB\_FILED": "",

"CARGO\_TYPE": "",

"PORT\_OF\_DESTINATION\_CODE": "",

"PORT\_OF\_LOADING": "",

"EGM\_NO": "",

"SHIPPING\_BILL\_NO": "",

"NATURE\_OF\_CARGO": ""

},

"responseStatus": "SUCCESS"

}

],

"error": "false",

"code": "200",

"message": "Success"

}

1. **In case vcn number exist**

{

"response": [

{

"response": {

"SHIPPING\_BILL\_DATE": "00000000",

"VEHICLE\_INFO": [],

"EXPORTER\_NAME": "",

"ROTATION\_NO": "",

"LEO\_DATE": "00000000",

"EGM\_DATE": "",

"ROTATION\_DATE": "",

"VCN\_NO": "",

"ALLOW\_FOR\_SHIPMENT\_DATE": "",

"PORT\_OF\_ORIGIN": "",

"PORT\_WHERE\_SB\_FILED": "",

"CARGO\_TYPE": "",

"PORT\_OF\_DESTINATION\_CODE": "",

"PORT\_OF\_LOADING": "",

"EGM\_NO": "",

"SHIPPING\_BILL\_NO": "",

"NATURE\_OF\_CARGO": ""

},

"responseStatus": "SUCCESS"

}

],

"error": "false",

"code": "200",

"message": "Success"

}

**Status Code 200**: vehicle 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/MPT/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/MPT/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"}'***

## Authentication Mechanism MPT API

To connect with the MPT system, we need a username and password from the MPT system.

Below is the step to generate authorization header

1- Create a string in the below format

**username:password**

2- Encode the above string with a Base64 encoder.

3- Now create a header in the below format

**authorization: Basic <Base64 encode string here>**

**Curl**

***curl -X GET \***

***'https://eportal.mptgoa.com:8000/zvesdet/vesseldet?sap-client=150&vcn\_no=123456789012' \***

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

***-H 'authorization: Basic V0VCX1VTRVI6bXB0Z29hQDE=' \***

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

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

***-H 'postman-token: 9f6947b1-e3da-6623-a624-73574c51afab' \***

***-d '{***

***"uid": "WEB\_USER",***

***"pwd": "mptgoa@1"***

***}'***