**ULIP Integration Requirement Document**

Version No.: 1.0

Date: 17/08/2021

Project Name: ULIP

This document contains proprietary information of NEC corporation India Pvt Ltd**.** Unauthorized access, copying and replication are prohibited. This document must not be copied in whole or part by any means, without the written authorization of NEC corporation India Pvt Ltd, Noida, India.

Revision History

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Version | Date | Author | Reviewer | Significant Changes |
| 1.0 | 17/08/2021 | Hasan Mhad Khan |  | Baseline Version |
| 1.0 | 19/09/2021 | Hasan Mhad Khan |  | Response update |

**Table of Contents**

[Introduction 4](#_Toc80104165)

[1.1 Purpose 4](#_Toc80104166)

[The Overall Description 4](#_Toc80104167)

[1.2 Data Integration between JNPT System and ULIP application 4](#_Toc80104168)

[1.3 JNPT/01 5](#_Toc80104169)

[1.3.1 Technical Approach 5](#_Toc80104170)

[1.4 JNPT/02 8](#_Toc80104171)

[1.4.1 Technical Approach 8](#_Toc80104172)

[1.5 JNPT/03 12](#_Toc80104173)

[1.5.1 Technical Approach 12](#_Toc80104174)

[1.6 Data Transmission & Authentication Mechanism 15](#_Toc80104175)

# 

# Introduction

## Purpose

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

This document details the following points:

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

Following are the point for accessing information:

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

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

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

## JNPT/01

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S. No.** | **Field Name** | **Field Description** | **Format** | **Required/Not – Required** | **Length** |
| 1 | **vcnNo** | vessel call number as available in JNPT system. | ^[a-zA-Z0-9]{2,14}$ | Required | Min 2  Max 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. JNPT API will share details of vessel information which exist in JNPT system in JSON format.
4. JNPT 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 M726412 is shared by ULIP system, then JNPT-integration will make a request to JNPT 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/JNPT/01>

{"vcnNo":"M7264"}

**Curl URL**

curl --location --request POST 'https://www.ulip.dpiit.gov.in/ulip/v1.0.0/JNPT/01' \

--header 'Authorization: Bearer eyJhbGciOiJIUzUxMiJ9.eyJzdWIiOiJ0ZXN0MSIsImlhdCI6MTYzMTg1NjczMiwiYXBwcyI6ImRhdGFwdXNoIn0.2W0qP2zPiiU13fmoor6PeaznQ-9i6h0ylhHjLMx8L3g4fh5fCBQgNRYAuJercDy33XILEvs7z6ORDrDe3HQwaA' \

--header 'Content-Type: application/json' \

--header 'Accept: application/json' \

--data-raw '{"vcnNo":"M7264"}'

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 JNPT system**

{

"response": [

{

"response": [],

"responseStatus": "SUCCESS"

}

],

"error": "false",

"code": "200",

"message": "Success"

}

1. **In case VCN number exist**

{

"response": [

{

"response": [

{

"Application Type": "I",

"IMO Numner": "9804928",

"Shipping Line Code": "",

"ShippingAgentCode": "GAC02",

"Last Port of Call Name.": "Bombay=Mumbai(exBombay)",

"Vessel Name": "MT FURANO GALAXY",

"ATA": null,

"ATD": null,

"ETA": "20/07/2021 20:20",

"VCN No": "M7264",

"ETD": "21/07/2021 16:17",

"Port Of Arrival Name": "HaziraPort/Surat",

"Vessel Type": "F"

}

],

"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.

## JNPT/02

This API will take **VCN number, BE number and shipping bill number** and connect with JNPT API to get data.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S. No.** | **Field Name** | **Field Description** | **Format** | **Required/Not – Required** | **Length** |
| 1 | **beNo** | Bill of Entry Number as available in JNPT system. | ^[a-zA-Z0-9]{1,7}$ | Required | Min 1 max 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. JNPT API will share details of cargo information which exist in JNPT system in JSON format.
4. JNPT 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 4756840 and shipping bill number shared by ULIP system, then JNPT- integration will make a request to JNPT 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/JNPT/02>

{beNo":"4756840”}

**Curl URL**

curl --location --request POST 'https://www.ulip.dpiit.gov.in/ulip/v1.0.0/JNPT/02' \

--header 'Authorization: Bearer eyJhbGciOiJIUzUxMiJ9.eyJzdWIiOiJ0ZXN0MSIsImlhdCI6MTYzMTg1NjczMiwiYXBwcyI6ImRhdGFwdXNoIn0.2W0qP2zPiiU13fmoor6PeaznQ-9i6h0ylhHjLMx8L3g4fh5fCBQgNRYAuJercDy33XILEvs7z6ORDrDe3HQwaA' \

--header 'Content-Type: application/json' \

--header 'Accept: application/json' \

--data-raw '{"beNo":"4756840"}'

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 beNo number**

{

"response": null,

"error": "true",

"code": "400",

"message": "Data format failed OR wrong value entered at: beNo. Format should follow ^[a-zA-Z0-9]{1,7}$"

}

1. **In case of BE number does not exist in JNPT system**

{

"response": [

{

"response": [],

"responseStatus": "SUCCESS"

}

],

"error": "false",

"code": "200",

"message": "Success"

}

1. **In case BE number exist**

{

"response": [

{

"response": [

{

"Marks No": null,

"IGM Date": "26/07/2021 00:00",

"Out of Charge Date": null,

"Mode of Transport": "R",

"CHA Code": "AAK02",

"IGM NO": 312,

"Out of Charge No": null,

"Survey Date": null,

"DO Date": null,

"Goods Description": null,

"Importer Address": null,

"Nature of Cargo": "C",

"Type of Packages": "PROJECT COACHES",

"Vehicle Info": [

{

"Vehicle Number": "TRK145570",

"Truck Entry Permit No": null,

"Truck Entry Time": null,

"Truck Exit Time": null,

"vehicleNum": "TRK145570"

},

{

"Vehicle Number": "TRK145570",

"Truck Entry Permit No": null,

"Truck Entry Time": null,

"Truck Exit Time": null,

"vehicleNum": "TRK145570"

}

],

"Unit of Measurement": null,

"Be No": "BE5787",

"Line No": null,

"Delivery Oder No": 109,

"BL No": null,

"Be Date": "26/07/2021 00:00",

"Importer Name": null,

"Surveyor Code": "",

"No of Packages Qty": null,

"Sub Line No": null,

"Cargo Type": "PROJECT",

"Country of Origin": null

}

],

"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.

## JNPT/03

This API will take **VCN number, BE number and shipping bill number** and connect with JNPT API to get data.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S. No.** | **Field Name** | **Field Description** | **Format** | **Required/Not – Required** | **Length** |
| 1 | **sbillNo** | Shipping Bill number as available in JNPT 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. JNPT API will share details of cargo information which exist in JNPT system in JSON format.
4. JNPT 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 is shared by ULIP system, then JNPT-integration will make a request to JNPT 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/JNPT/03>

{"sbillNo":"2321654"}

**Curl URL**

curl --location --request POST 'https://www.ulip.dpiit.gov.in/ulip/v1.0.0/JNPT/03' \

--header 'Authorization: Bearer eyJhbGciOiJIUzUxMiJ9.eyJzdWIiOiJ0ZXN0MSIsImlhdCI6MTYzMTg1NjczMiwiYXBwcyI6ImRhdGFwdXNoIn0.2W0qP2zPiiU13fmoor6PeaznQ-9i6h0ylhHjLMx8L3g4fh5fCBQgNRYAuJercDy33XILEvs7z6ORDrDe3HQwaA' \

--header 'Content-Type: application/json' \

--header 'Accept: application/json' \

--data-raw '{"sbillNo":"2321654"}'

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 sbillNo number**

{

"response": null,

"error": "true",

"code": "400",

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

}

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

{

{

"response": [

{

"response": [],

"responseStatus": "SUCCESS"

}

],

"error": "false",

"code": "200",

"message": "Success"

}

1. **In case SB number exist**

{

"response": [

{

"response": [

{

"Leo Date": null,

"Nature of Cargo": null,

"Vehicle Info": null,

"Vcn No": "KJ8777",

"Port of Loading": "SAIM PORT",

"Exporter Name": "ACT INFRAPORT LTD.,",

"Port of Destination Code": null,

"Port of Origin": null,

"Rotation Date": null,

"Shipping Bill No": "2321654",

"Port Where SB Filed": null,

"Allow for Shipment Date": null,

"Shipping Date": "29/06/2021 00:00",

"EGM Date": null,

"EGM No": null,

"Cargo Type": "LIQUID",

"Rotation No": null

}

],

"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 JNPT system through a data exchange URL that has following form:

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

**Body:**

{"vcnNo":"M7264"}

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/JNPT/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":"M7264”}'***