**ULIP Integration Requirement Document**

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Project Name: ULIP

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|  |  |  |  |  |

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# Introduction

## Purpose

The purpose of this document is to define and provide details for accessing API for vehicle information from ULIP system.

This document details the following points:

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

# The Overall Description

User will share the vehicle information such as **vehicle number, chassis number** and **engine number** based on data send by user ULIP system will call respective VAHAN APIs for accessing information.

Following are the point for accessing vehicle information: -

1. This API will share vehicle data based on information provided by user.
2. ULIP will expose three API for getting data from VAHAN API.
3. For **VAHAN/01** ULIP will take **vehicle** **number** from user and get data from vahan API based on vehicle number.
4. For **VAHAN/02** ULIP will take **chassis number** from user and get data from vahan API based on chassis number.
5. For **VAHAN/03** ULIP will take **engine number** from user and get data from vahan API based on engine number.

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

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

## VAHAN/01

This API will take vehicle number and connect with VAHAN API to get data.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S. No.** | **Field Name** | **Field Description** | **Format** | **Required/Not – Required** | **Length** |
| 1 | vehiclenumber | Vahicle Number as available in VAHAN system | [A-Z]{2}[0-9]{2}[A-Z]{0,5}[0-9]{4}$  XXNNXNNNN  X-> Alphabets  N-> Numeric | Required | 9 |

### Technical Approach

1. All the data will be shared through rest web services.
2. ULIP system will provide **vehicle number** for which detail is required.
3. VAHAN API will share details of vehicle which exist in VAHAN system in xml format.
4. Data receive from VAHAN is in XML format. ULIP system convert this data to string format and assign it to key “**response**”.
5. ULIP system will provide the data in JSON Object format in response body.

**Example:**

User will share Vehicle Number **XX12X2345** to ULIP system, then ULIP system will make a request to VAHAN API.

**Request:**

The request must be of the following format, where vehicle number is passed within the URL

body in JSON format.

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

{  
 "vehiclenumber": "XX12X3456"  
}

**Curl URL**

curl -X POST \  
 https://www.ulip.dpiit.gov.in/ulip/v1.0.0/VAHAN/01 \  
 -H 'accept: application/json' \  
 -H 'authorization: Bearer eyJhbGciOiJIUzUxMiJ9.eyJzdWIiOiJ0ZXN0MSIsImlhdCI6MTYyNTIyNDQxMCwiYXBwcyI6ImRhdGFwdXNoIn0.STkF5e\_NKQeiv7Kyu6rRRRYMisrEbQwUjZbJzoi2u-1LNH2oTsJQToVytU8FCQua6xzJNnIE5IFT9Bh2CLFugA' \  
 -H 'content-type: application/json' \  
 -d '{  
 "vehiclenumber": "XX12X3456"  
}'

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**

{  
 "response": null,  
 "error": "true",  
 "code": "400",  
 "message": "Data format failed OR wrong value entered at: vehiclenumber. Format should follow [A-Z]{2}[0-9]{2}[A-Z]{0,5}[0-9]{4}$"  
}

1. **In case of vehicle number does not exist in VAHAN system**

{  
 "response": [  
 {  
 "response": "<?xml version=\"1.0\" encoding=\"UTF-8\" standalone=\"yes\"?>\n<VehicleDetails>\n <stautsMessage>Vehicle Data Not Found</stautsMessage>\n</VehicleDetails>\n",  
 "responseStatus": "SUCCESS"  
 }  
 ],  
 "error": "false",  
 "code": "200",  
 "message": "Success"  
}

1. **In case vehicle exist**

{  
 "response": [  
 {  
 "response": "<?xml version=\"1.0\" encoding=\"UTF-8\" standalone=\"yes\"?>\n<VehicleDetails>\n <stautsMessage>OK</stautsMessage>\n <rc\_regn\_no>UP91L0001</rc\_regn\_no>\n <rc\_regn\_dt>26-Jan-2017</rc\_regn\_dt>\n <rc\_owner\_name>RAHUL KUMAR</rc\_owner\_name>\n <rc\_present\_address>VIVEK NAGAR, NEAR MEHAR KOTHI, HAMIRPUR, -999999</rc\_present\_address>\n <rc\_permanent\_address>VIVEK NAGAR, NEAR MEHAR KOTHI, HAMIRPUR, -999999</rc\_permanent\_address>\n <rc\_vh\_class\_desc>M-Cycle/Scooter(2WN)</rc\_vh\_class\_desc>\n <rc\_chasi\_no>ME4JF509AH7069705</rc\_chasi\_no>\n <rc\_eng\_no>JF50E76069768</rc\_eng\_no>\n <rc\_maker\_desc>HONDA MOTORCYCLE AND SCOOTER INDIA (P) LTD</rc\_maker\_desc>\n <rc\_fuel\_desc>PETROL</rc\_fuel\_desc>\n <rc\_color>P A WHITE</rc\_color>\n <rc\_fit\_upto>25-Jan-2032</rc\_fit\_upto>\n <rc\_tax\_upto>25-01-2032</rc\_tax\_upto>\n <rc\_insurance\_comp>HDFC ERGO General Insurance Company Ltd</rc\_insurance\_comp>\n <rc\_insurance\_policy\_no>2320100501934300000</rc\_insurance\_policy\_no>\n <rc\_insurance\_upto>15-Sep-2020</rc\_insurance\_upto>\n <rc\_manu\_month\_yr>1/2017</rc\_manu\_month\_yr>\n <rc\_status\_as\_on>02-Jul-2021</rc\_status\_as\_on>\n <rc\_status>ACTIVE</rc\_status>\n</VehicleDetails>\n",  
 "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.

## VAHAN/02

This API will take vehicle number and connect with VAHAN API to get data.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S. No.** | **Field Name** | **Field Description** | **Format** | **Required/Not – Required** | **Length** |
| 1 | chasisnumber | Chassis Number as available in VAHAN system | ^[a-zA-Z0-9]{1,17}$ | Required | 17 |

### Technical Approach

1. All the data will be shared through rest web services.
2. ULIP system will provide **chassis number** for which detail is required.
3. VAHAN API will share details of vehicle which exist in VAHAN system in xml format.
4. Data receive from VAHAN is in XML format. ULIP system convert this data to string format and assign it to key “**response**”.
5. ULIP system will provide the data in JSON Object format in response body.

**Example:**

Chassis Number **MA6MFBC1BBT096358** is shared by ULIP system, then VAHAN-integration will make a request to VAHAN API.

**Request:**

The request must be of the following format, where chassis number is passed within the URL

body in JSON format.

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

{  
 "chasisnumber": "MA6MFBC1BBT096358"  
}

**Curl URL**

curl -X POST \  
 https://www.ulip.dpiit.gov.in/ulip/v1.0.0/VAHAN/02 \  
 -H 'accept: application/json' \  
 -H 'authorization: Bearer eyJhbGciOiJIUzUxMiJ9.eyJzdWIiOiJ0ZXN0MSIsImlhdCI6MTYyNTIyNDQxMCwiYXBwcyI6ImRhdGFwdXNoIn0.STkF5e\_NKQeiv7Kyu6rRRRYMisrEbQwUjZbJzoi2u-1LNH2oTsJQToVytU8FCQua6xzJNnIE5IFT9Bh2CLFugA' \  
 -H 'content-type: application/json' \  
 -d '{  
 "chasisnumber": "MA6MFBC1BBT096358"  
}'

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**

{  
 "response": null,  
 "error": "true",  
 "code": "400",  
 "message": "Data format failed OR wrong value entered at: chasisnumber. Format should follow ^[a-zA-Z0-9]{1,17}$"  
}

1. **In case of chassis number does not exist in VAHAN system**

{  
 "response": [  
 {  
 "response": "<?xml version=\"1.0\" encoding=\"UTF-8\" standalone=\"yes\"?>\n<VehicleDetails>\n <stautsMessage>Vehicle Data Not Found</stautsMessage>\n</VehicleDetails>\n",  
 "responseStatus": "SUCCESS"  
 }  
 ],  
 "error": "false",  
 "code": "200",  
 "message": "Success"  
}

1. **In case of chassis number exist**

{  
 "response": [  
 {  
 "response": "<?xml version=\"1.0\" encoding=\"UTF-8\" standalone=\"yes\"?>\n<VehicleDetails>\n <stautsMessage>OK</stautsMessage>\n <rc\_regn\_no>MH14DA1845</rc\_regn\_no>\n <rc\_regn\_dt>11-Oct-2011</rc\_regn\_dt>\n <rc\_owner\_name>PRASAD DHOKE</rc\_owner\_name>\n <rc\_present\_address>SHILPA PALACE NR VITTHAL MANDIR, AKURDI, PUNE, Pune-411035</rc\_present\_address>\n <rc\_permanent\_address>SHILPA PALACE NR VITTHAL MANDIR, AKURDI, PUNE, Pune-411035</rc\_permanent\_address>\n <rc\_vh\_class\_desc>Motor Car(LMV)</rc\_vh\_class\_desc>\n <rc\_chasi\_no>MA6MFBC1BBT096358</rc\_chasi\_no>\n <rc\_eng\_no>B10S1710099KC2</rc\_eng\_no>\n <rc\_maker\_desc>GENERAL MOTORS INDIA PVT LTD</rc\_maker\_desc>\n <rc\_fuel\_desc>PETROL/CNG</rc\_fuel\_desc>\n <rc\_color>S GREY</rc\_color>\n <rc\_fit\_upto>10-Oct-2026</rc\_fit\_upto>\n <rc\_tax\_upto>LTT</rc\_tax\_upto>\n <rc\_insurance\_comp>BAJAJ ALLIANZ</rc\_insurance\_comp>\n <rc\_insurance\_policy\_no>OG-21-2042-1805-00000086</rc\_insurance\_policy\_no>\n <rc\_insurance\_upto>06-Dec-2021</rc\_insurance\_upto>\n <rc\_manu\_month\_yr>3/2011</rc\_manu\_month\_yr>\n <rc\_status\_as\_on>02-Jul-2021</rc\_status\_as\_on>\n <rc\_status>ACTIVE</rc\_status>\n</VehicleDetails>\n",  
 "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.

## VAHAN/03

This API will take engine number and connect with VAHAN API to get data.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S. No.** | **Field Name** | **Field Description** | **Format** | **Required/Not – Required** | **Length** |
| 1 | enginenumber | Engine Number as available in VAHAN system | ^[a-zA-Z0-9]{1,12}$ | Required | 12 |

### Technical Approach

1. All the data will be shared through rest web services.
2. ULIP system will provide **chassis number** for which detail is required.
3. VAHAN API will share details of vehicle which exist in VAHAN system in xml format.
4. Data receive from VAHAN is in XML format. ULIP system convert this data to string format and assign it to key “**response**”.
5. ULIP system will provide the data in JSON Object format in response body.

**Example:**

Engine Number **K12MN4490060** is shared by ULIP system, then VAHAN-integration will make a request to VAHAN API.

**Request:**

The request must be of the following format, where vehicle number is passed within the URL

body in JSON format.

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

{  
 "enginenumber": "K12MN4490060"  
}

**Curl URL**

curl -X POST \  
 https://www.ulip.dpiit.gov.in/ulip/v1.0.0/VAHAN/03 \  
 -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: 9cb5ac3c-59dd-4505-0b69-a03c07e59f26' \  
 -d '{  
 "enginenumber": "K12MN4490060"  
}'

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**

{  
 "response": null,  
 "error": "true",  
 "code": "400",  
 "message": "Data format failed OR wrong value entered at: enginenumber. Format should follow ^[a-zA-Z0-9]{1,12}$"  
}

1. **In case of engine number does not exist in VAHAN system**

{  
 "response": [  
 {  
 "response": "<?xml version=\"1.0\" encoding=\"UTF-8\" standalone=\"yes\"?>\n<VehicleDetails>\n <stautsMessage>Vehicle Data Not Found</stautsMessage>\n</VehicleDetails>\n",  
 "responseStatus": "SUCCESS"  
 }  
 ],  
 "error": "false",  
 "code": "200",  
 "message": "Success"  
}

1. **In case of engine number exist**

{  
 "response": [  
 {  
 "response": "<?xml version=\"1.0\" encoding=\"UTF-8\" standalone=\"yes\"?>\n<VehicleDetails>\n <stautsMessage>OK</stautsMessage>\n <rc\_regn\_no>KL03AD2548</rc\_regn\_no>\n <rc\_regn\_dt>29-Dec-2018</rc\_regn\_dt>\n <rc\_owner\_name>THOMAS T V</rc\_owner\_name>\n <rc\_present\_address>THEKKECHARUVIL HOUSE, PAYYANAMON, KONNITHAZHAM,PATHANAMTHITTA, -0</rc\_present\_address>\n <rc\_permanent\_address>THEKKECHARUVIL HOUSE, PAYYANAMON, KONNITHAZHAM PATHANAMTHITTA, -689692</rc\_permanent\_address>\n <rc\_vh\_class\_desc>Motor Car(LMV)</rc\_vh\_class\_desc>\n <rc\_chasi\_no>MA3EWB22SJL604806</rc\_chasi\_no>\n <rc\_eng\_no>K12MN4490011</rc\_eng\_no>\n <rc\_maker\_desc>MARUTI SUZUKI INDIA LTD</rc\_maker\_desc>\n <rc\_fuel\_desc>PETROL</rc\_fuel\_desc>\n <rc\_color>NEXA BLUE STARGAZE</rc\_color>\n <rc\_fit\_upto>28-Dec-2033</rc\_fit\_upto>\n <rc\_tax\_upto>30-09-2033</rc\_tax\_upto>\n <rc\_insurance\_comp></rc\_insurance\_comp>\n <rc\_insurance\_policy\_no></rc\_insurance\_policy\_no>\n <rc\_insurance\_upto></rc\_insurance\_upto>\n <rc\_manu\_month\_yr>11/2018</rc\_manu\_month\_yr>\n <rc\_status\_as\_on>02-Jul-2021</rc\_status\_as\_on>\n <rc\_status>ACTIVE</rc\_status>\n</VehicleDetails>\n",  
 "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 VAHAN system through a data exchange URL that has following form:

https://www.ulip.dpiit.gov.in/ulip/v1.0.0/VAHAN/<sequence number>

**Body:**

For VAHAN/01

{

"vehiclenumber": "UP91L0001"

}

For VAHAN/02

{

"chasisnumber": "MA6MFBC1BBT096358"

}

For VAHAN/03

{

"enginenumber": "K12MN4490011"

}

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 --location --request POST 'https://www.ulip.dpiit.gov.in/ulip/v1.0.0/user/login' \***

***--header 'Accept: application/json' \***

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

***--data-raw '{***

***"username": "xxxx",***

***"password": "xxxx@123"***

***}'***

**Authorization:**

***Bearer***

***eyJhbGciOiJIUzUxMiJ9.eyJzdWIiOiJ0ZXN0MSIsImlhdCI6MTYyNTIzMDQyNywiYXBwcyI6ImRhdGFwdXNoIn0.rhumwWJ8BWeeHe9CYmIV1UKyJk-kLHA\_ovX5Zi2OwxEv-td-KpxnfbKDI\_8FZsOoggqx3Al-Du1y2qMoUD7uzA'***

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/VAHAN/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 '{***

***"vehiclenumber": "UP91L0001"***

***}'***

# 