API Document

(trinityICCC
Integrated Command & Control Center)
CONTENTS

API reference ......................................................................................................................... 3
ITS Integration.......................................................................................................................... 3
   Vehicle Assign Notification................................................................................................. 3
   BUS Stop Display integration............................................................................................. 4
   Get All bus Schedules......................................................................................................... 5
   Live Route Details ............................................................................................................. 6
   ETA Details for busroute..................................................................................................... 7
   Alert notification................................................................................................................ 8
SWM Integration...................................................................................................................... 10
   Vehicle Assign Notification............................................................................................... 10
   BIN Alert Notification....................................................................................................... 11
   incomplete trip details....................................................................................................... 11
   route change notification................................................................................................. 12
   bin sensor status............................................................................................................ 13
   smart bin registration..................................................................................................... 16
Smart Lighting Integration ..................................................................................................... 17
   smart lighting pole registration ...................................................................................... 17
   Asset ONBOARDING.......................................................................................................... 18
   Real time data integration................................................................................................. 19
   Energy consumption ........................................................................................................ 22
API REFERENCE

trinityICCC uses REST based API for integration with 3rd party Smart city elements to control, view and manage the subsystems. This document describes the standard API requirement to complete the integration. The data sent in request and response both are in JSON format.

ITS INTEGRATION

VEHICLE ASSIGN NOTIFICATION

This REST API is meant to be consumed by Intelligent transport Management Application to Notify the Route changes happened for a particular bus to ICCC

ROOT URL: **http://<IP>:<PORT>/iotWebservices/**

URL: **http://<IP>:<PORT>/iotWebservices/ITMSIntegration/sendItmsActionDetails**

**DESCRIPTION:** This API is used for notifying vehicle assign details to ICCCApplication.

**PATH:** /ITMSIntegration/sendItmsActionDetails

**METHOD:** Post

**URL PARAMS:** None

**REQUEST HEADERS:** Content-Type: application/json

**DATA PARAMS:**

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Parameter Type</th>
<th>Data Type</th>
<th>Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>phoneNo</td>
<td>body</td>
<td>String</td>
<td>true</td>
</tr>
<tr>
<td>name</td>
<td>body</td>
<td>String</td>
<td>true</td>
</tr>
<tr>
<td>basicId</td>
<td>body</td>
<td>String</td>
<td>true</td>
</tr>
<tr>
<td>message</td>
<td>body</td>
<td>String</td>
<td>true</td>
</tr>
</tbody>
</table>

**CONSUMES:** application/json
BUS STOP DISPLAY INTEGRATION

This REST API is meant to be consumed by Intelligent transport Management Application to create, edit and delete operation for bus stop display board.

ROOT URL: http://<IP>:<PORT>/IOT_integration/

URL: http://<IP>:<PORT>/IOT_integration/IOTIntegration/busStopDisplayOperation

DESCRIPTION: This api is used for create, edit and delete operation for bus stop display board.

METHOD: Post

URL PARAMS: None

REQUEST HEADERS: Content-Type: application/json

DATA PARAMS:

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Parameter Type</th>
<th>Data Type</th>
<th>Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>operation_id</td>
<td>body</td>
<td>int</td>
<td>true</td>
</tr>
<tr>
<td>macAddress</td>
<td>body</td>
<td>String</td>
<td>true</td>
</tr>
<tr>
<td>deviceName</td>
<td>body</td>
<td>String</td>
<td>true</td>
</tr>
</tbody>
</table>

CONSUMES: application/json

PRODUCES: application/json

SAMPLE INPUT:

```json
{
}
```
"operation_id": 1,
"macAddress": "13246544464",
"deviceName": "demo_name"
}

**RESPONSE HEADERS**: None

**SUCCESS RESPONSE**:  
**CODE**: 200  
**CONTENT**: {"status": "success"}

**ERROR RESPONSE**:  
**CODE**: 200 or 500  
**CONTENT**: {"status": "failed", "message": "failed due to 'message-details'"}

GET ALL BUS SCHEDULES

This REST API is meant to be consumed by Intelligent transport Management Application to Get All Scheduled Route details.


**DESCRIPTION**: This api is used to get scheduled routes.

**PATH**: /IOTIntegration/getScheduledRoutes

**METHOD**: Post

**URL PARAMS**: None

**REQUEST HEADERS**: Content-Type: application/json

**DATA PARAMS**:

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Parameter Type</th>
<th>Data Type</th>
<th>Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>operation_id</td>
<td>body</td>
<td>int</td>
<td>true</td>
</tr>
<tr>
<td>macAddress</td>
<td>body</td>
<td>String</td>
<td>true</td>
</tr>
<tr>
<td>deviceName</td>
<td>body</td>
<td>String</td>
<td>true</td>
</tr>
</tbody>
</table>

**CONSUMES**: application/json
**PRODUCES:** application/json

**SAMPLE INPUT:**

```json
{
    "operation_id": 1,
    "macAddress": "13246544464",
    "deviceName": "demo_name"
}
```

**RESPONSE HEADERS:** None

**SUCCESS RESPONSE:**

- **CODE:** 200
- **CONTENT:**{"status": "success"}

**ERROR RESPONSE:**

- **CODE:** 200 or 500
- **CONTENT:**{"status": "failed", "message": "failed due to message-details"}

**LIVE ROUTE DETAILS**

This REST API is meant to be consumed by Intelligent transport Management Application to Get route details which are live (route details, poi details)


**URL:** [http://<IP>:<PORT>/IOT_integration/IOTIntegration/getOnGoingRouteDetails](http://<IP>:<PORT>/IOT_integration/IOTIntegration/getOnGoingRouteDetails)

**DESCRIPTION:** This using mac address.

**PATH:** /IOTIntegration/getOnGoingRouteDetails

**METHOD:** Post

**URL PARAMS:** None

**REQUEST HEADERS:** Content-Type: application/json

**DATA PARAMS:**

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Parameter Type</th>
<th>Data Type</th>
<th>Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>macAddress</td>
<td>body</td>
<td>String</td>
<td>true</td>
</tr>
</tbody>
</table>
CONSUMES: application/json

PRODUCES: application/json

SAMPLE INPUT: {"routeId":8361,"macAddress":"861075026365494"}

RESPONSE HEADERS: None

SUCCESS RESPONSE:

CODE: 200

CONTENT: {"status": true, "ongoingRoutes":[]} 

Or

{"status": false, "message": "There is no vehicle for This mac address"}

ERROR RESPONSE:

CODE: 200

CONTENT: {
"status ":"failed" ,
"message": "failed due to ‘message-details’"
}

ETA DETAILS FOR BUSROUTE

This REST API is meant to be consumed by Intelligent transport Management Application to Get get ETA details for particular bus stop.

ROOT URL: http://<IP>:<PORT>/IOT_integration/

URL: http://<IP>:<PORT>/IOT_integration/IOTIntegration/getPoiETADat

DESCRIPTION: This api is used to get ETA details for particular bus stop.

PATH: IOTIntegration/getPoiETADat

METHOD: Post

URL PARAMS: None

REQUEST HEADERS: Content-Type: application/json

DATA PARAMS:

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Parameter Type</th>
<th>Data Type</th>
<th>Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>operation_id</td>
<td>body</td>
<td>Int</td>
<td>true</td>
</tr>
<tr>
<td>routeId</td>
<td>body</td>
<td>Int</td>
<td>true</td>
</tr>
</tbody>
</table>
**CONSUMES**: application/json

**PRODUCES**: application/json

**SAMPLE INPUT**: 
```
{"operationId":1,"routeld":8361,"poilId":8277}
```

**RESPONSE HEADERS**: None

**SUCCESS RESPONSE**:

**CODE**: 200

**CONTENT**: 
```
{"status":true,"poiEtaData":[{}]
```

Or
```
{"status":true,"message":"no result found"}
```

**ERROR RESPONSE**:

**CODE**: 200

**CONTENT**: 
```
{"status":false,"message":"failed due to ‘message-details’"}
```

**ALERT NOTIFICATION**

This REST API is meant to be consumed by Intelligent transport Management Application to notify all alert coming from a bus terminals


**PATH**: IOTIntegration/insertPanicAlertData

**METHOD**: Post

**URL PARAMS**: None

**REQUEST HEADERS**: Content-Type: application/json

**DATA PARAMS**:

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Parameter Type</th>
<th>Data Type</th>
<th>Required</th>
</tr>
</thead>
</table>
| dateTime       | body           | String    | true     

---

trinityICCC – API Document
**CONSUMES**: application/json

**PRODUCES**: application/json

**SAMPLE INPUT**:

```json
{
    "dateTime": "2017-11-21 15:02:23",
    "alertType": "Panic Alert",
    "alertTypeId": 1036,
    "macId": "ITMS4321",
    "latitude": 15.848595,
    "basicId": 2118,
    "location": "",
    "longitude": 74.49979
}
```

**RESPONSE HEADERS**: None

**SUCCESS RESPONSE**:

**CODE**: 200

**CONTENT**: 

```json
{ "status": true, "message": "inserted successfully" }
```

**ERROR RESPONSE**:

**CODE**: 200

**CONTENT**: 

```json
{ "status": false, "message": "failed due to 'message-details'" }
```
SWM INTEGRATION

VEHICLE ASSIGN NOTIFICATION

This REST API is meant to be consumed by Solid Waste Management Application to notifying vehicle assign details to ICC Application

ROOT URL: http://<IP>:<PORT>/iotWebservices/

URL: http://<IP>:<PORT>/iotWebservices/SWMIntegration/sendAssignedVehicleDetails

PATH: /SWMIntegration/sendAssignedVehicleDetails

METHOD: Post

URL PARAMS: None

REQUEST HEADERS: Content-Type: application/json

DATA PARAMS:

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Parameter Type</th>
<th>Data Type</th>
<th>Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>vehicleMacId</td>
<td>body</td>
<td>String</td>
<td>true</td>
</tr>
<tr>
<td>vehicleNumber</td>
<td>body</td>
<td>String</td>
<td>true</td>
</tr>
<tr>
<td>basicId</td>
<td>body</td>
<td>String</td>
<td>true</td>
</tr>
</tbody>
</table>

CONSUMES: application/json

PRODUCES: application/json

SAMPLE INPUT:{"vehicleMacId":"","vehicleNumber":"","basicId":"123"}

RESPONSE HEADERS: None

SUCCESS RESPONSE:

CODE: 200

CONTENT: {“success”:true,”message”:“Assigned vehicle updated successfully”}

ERROR RESPONSE:

CODE: 200 or 500

CONTENT: {“success”:false,”message”:”Error in updating assigned vehicle details”}
BIN ALERT NOTIFICATION
This REST API is meant to be consumed by Intelligent transport Management Application to notifying bin empty status details to ICCC Application.

2) ROOT URL: http://<IP>:<PORT>/iotWebservices/
   URL: http://<IP>:<PORT>/iotWebservices/SWMIntegration/sendBinEmptyStatus
   PATH: /SWMIntegration/sendBinEmptyStatus
   METHOD: Post
   URL PARAMS: None
   REQUEST HEADERS: Content-Type: application/json
   DATA PARAMS:

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Parameter Type</th>
<th>Data Type</th>
<th>Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>collectionTime</td>
<td>body</td>
<td>String</td>
<td>true</td>
</tr>
<tr>
<td>macId</td>
<td>body</td>
<td>String</td>
<td>true</td>
</tr>
<tr>
<td>basicId</td>
<td>body</td>
<td>String</td>
<td>true</td>
</tr>
</tbody>
</table>

   CONSUMES: application/json
   PRODUCES: application/json
   SAMPLE INPUT: {
   "collectionTime": "2017-01-0221:02:01",
   "macId": "123",
   "basicId": "123"
   }
   RESPONSE HEADERS: None
   SUCCESS RESPONSE:
   CODE: 200
   CONTENT: {
   "success": true,
   "message": "Updated bin empty status successfully"
   }
   ERROR RESPONSE:
   CODE: 200 or 500
   CONTENT: {
   "success": true,
   "message": "Error in updating bin empty status"
   }

INCOMPLETE TRIP DETAILS
This REST API is meant to be consumed by Solid Waste Management Application to notifying incomplete trip details to ICCC Application.
3) ROOT URL: http://<IP>:<PORT>/iotWebservices/

   URL: http://<IP>:<PORT>/iotWebservices/SWMIntegration/sendIncompleteTripDetails

PATH: /SWMIntegration/sendIncompleteTripDetails

METHOD: Post

URL PARAMS: None

REQUEST HEADERS: Content-Type: application/json

DATA PARAMS:

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Parameter Type</th>
<th>Data Type</th>
<th>Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>vehicleId</td>
<td>body</td>
<td>String</td>
<td>true</td>
</tr>
<tr>
<td>collectionPoints</td>
<td>body</td>
<td>JSON Array</td>
<td>true</td>
</tr>
</tbody>
</table>

CONSUMES: application/json

PRODUCES: application/json

SAMPLE INPUT:

```json
{"vehicleId":collectionPoints":
[{"collectionPoint":"Test","totalBins":20,"collectedBins":10,"collectedTime":"2017-01-02 08:12:12","binDetails":{"binId":"Bin1","houseHolderName":"Trinity","Status":true}]}
```

RESPONSE HEADERS: None

SUCCESS RESPONSE:

   CODE: 200
   
   CONTENT: {"success": true, "message": "Alert Registered Successfully"}

ERROR RESPONSE:

   CODE: 200 or 500
   
   CONTENT: {"success": false, "message": Error in alert registration"}

ROUTE CHANGE NOTIFICATION

This REST API is meant to be consumed by Solid Waste Management Application to notifying incomplete trip details to ICC Application.

1) ROOT URL: http://<IP>:<PORT>
URL: http://<IP>:<PORT>/IOT_integration/VehicleGatewayregistered/getRouteDetailsOfVehicle

PATH: /VehicleGatewayregistered/getRouteDetailsOfVehicle

METHOD: Post

URL PARAMS: None

REQUEST HEADERS: Content-Type: application/json

DATA PARAMS:

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Parameter Type</th>
<th>Data Type</th>
<th>Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>MacAddress</td>
<td>body</td>
<td>String</td>
<td>true</td>
</tr>
</tbody>
</table>

CONSUMES: application/json

PRODUCES: application/json

SAMPLE INPUT: {"MacAddress":"359569050319251"}

RESPONSE HEADERS: None

SUCCESS RESPONSE:

CODE: 200

CONTENT: [
  {"route_geom": "LINESTRING(15.840420000000002 74.5027, 15.83867 74.50199, 15.837430000000001 74.50145, 15.83632 74.501020000000001, 15.8355500000000001 74.500790000000009, 15.83449 74.50058, 15.834500000000002 74.50049, 15.8346600000000001 74.500250000000008, 15.834920000000002 74.4999900000000111, 15.83514 74.499670000000009, 15.835690000000001 74.49916, 15.83622 74.498640000000009, 15.836300000000002 74.49848, 15.83632 74.498340000000013, 15.836210000000001 74.498, 15.836030000000001 74.49693, 15.835810000000002 74.495910000000009), "bin": [{"Mac_Address": "359569050306514", "Lat": 15.837307103067026, "Long": 74.50147211551666}]}
]

ERROR RESPONSE:

CODE: 500

BIN SENSOR STATUS
This REST API is meant to be consumed by Solid Waste Management Application to notifying incomplete trip details to ICCC Application.
ROOT URL: http://<IP>:<PORT>/

URL: http://<IP>:<PORT>/trinity-SWM-API rest/getBinSensorData

PATH: /rest/getBinSensorData

METHOD: Post

URL PARAMS: None

REQUEST HEADERS: Content-Type: application/json

DATA PARAMS:

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Parameter Type</th>
<th>Data Type</th>
<th>Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>dt</td>
<td>body</td>
<td>String</td>
<td>true</td>
</tr>
<tr>
<td>MacAddress</td>
<td>body</td>
<td>String</td>
<td>true</td>
</tr>
<tr>
<td>vol</td>
<td>body</td>
<td>Integer</td>
<td>true</td>
</tr>
<tr>
<td>BasicId</td>
<td>body</td>
<td>String</td>
<td>true</td>
</tr>
</tbody>
</table>

CONSUMES: application/json

PRODUCES: application/json

SAMPLE INPUT:

{"dt":"2017-07-28 15:48:27","MacAddress":"359569050293332","vol":29,"BasicId":54333344654}

RESPONSE HEADERS: None

SUCCESS RESPONSE:

CODE: 200

CONTENT: {"Status":"success","Result":"inserted successfully."}

ERROR RESPONSE:

CODE: 200 or 500

CONTENT: {"success": error," message":" please enter correct data."}

3) ROOT URL: http://<IP>:<PORT>/

DESCRIPTION: This api is used to register vehicle Data to SWM.

PATH: VehicleGatewayregistered/vehicles

METHOD: Post

URL PARAMS: None

REQUEST HEADERS: Content-Type: application/json

DATA PARAMS:

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Parameter Type</th>
<th>Data Type</th>
<th>Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>operation_id</td>
<td>body</td>
<td>int</td>
<td>true</td>
</tr>
<tr>
<td>simNumber</td>
<td>body</td>
<td>String</td>
<td>true</td>
</tr>
<tr>
<td>macAddress</td>
<td>body</td>
<td>String</td>
<td>true</td>
</tr>
<tr>
<td>deviceName</td>
<td>body</td>
<td>String</td>
<td>true</td>
</tr>
</tbody>
</table>

Note: operation_id for Insert is 1, Update is 2, Delete is 3.

CONSUMES: application/json

PRODUCES: application/json

SAMPLE INPUT:

{"operation_id":1,"simNumber":"","macAddress":"","deviceName":""}
SMART BIN REGISTRATION
This REST API is meant to be consumed by Solid Waste Management Application to register Bin Id Details to SWM.

4) ROOT URL: http://<IP>:<PORT>/
   URL: http://<IP>:<PORT>/IOT_integration/AllregisteredBins/bindetails

PATH: AllregisteredBins/bindetails
METHOD: Post
URL PARAMS: None
REQUEST HEADERS: Content-Type: application/json
DATA PARAMS:

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Parameter Type</th>
<th>Data Type</th>
<th>Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>operation_id</td>
<td>body</td>
<td>int</td>
<td>true</td>
</tr>
<tr>
<td>macAddress</td>
<td>body</td>
<td>String</td>
<td>true</td>
</tr>
<tr>
<td>deviceName</td>
<td>body</td>
<td>String</td>
<td>true</td>
</tr>
<tr>
<td>latitude</td>
<td>body</td>
<td>String</td>
<td>true</td>
</tr>
<tr>
<td>longitude</td>
<td>body</td>
<td>String</td>
<td>true</td>
</tr>
<tr>
<td>simNumber</td>
<td>body</td>
<td>String</td>
<td>true</td>
</tr>
<tr>
<td>binTagId</td>
<td>body</td>
<td>String</td>
<td>true</td>
</tr>
</tbody>
</table>

Note: operation_id for Insert is 1, Update is 2, Delete is 3.
CONSUMES: application/json
PRODUCES: application/json
SAMPLE INPUT:
{
    "operation_id": 1,
    "macAddress": "",
    "deviceName": "",
}
"latitude": "",
"longitude": "",
"simNumber": "",
"binTagId": ""
}

**RESPONSE HEADERS:** None

**SUCCESS RESPONSE:**

- **CODE:** 200
- **CONTENT:** {"Status": "success"}

**ERROR RESPONSE:**

- **CODE:** 200 or 500
- **CONTENT:** {"success": "error"}

---

**SMART LIGHTING INTEGRATION**

**SMART LIGHTING POLE REGISTRATION**

This REST API is meant to be consumed by Lighting Application System to manage Lighting devices register by the trinityICCC Administrator. The data sent in request and response both are in JSON format.

1. **Response**
   The status of the response can be determined from two fields:
   1. **status** field in response body
   2. HTTP Status Header

**Response Body:**

The response body will always have a **status** field showing the status of the request. The value of the **status** field will be:

1. **success** - if the request was successful
2. **failure** - if the request was failure

In case of failure the response body will also contain a **message** field that will contain the error message.
HTTP Status Header:
The HTTP Status Header in the response will be 200 OK in case of success and will be anything other than 200 OK in case of failure.

ASSET ONBOARDING

Device Registration

API:  http://IP:PORT/ICCCIntigration/registerLightingDevice

Method: POST

Request Body:

<table>
<thead>
<tr>
<th>Sl.no</th>
<th>Field</th>
<th>Data type</th>
<th>Description</th>
<th>Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Operation_ID</td>
<td>integer</td>
<td>ID of operation to be performed</td>
<td>1 for adding new device, 2 for updating existing device</td>
</tr>
<tr>
<td>2</td>
<td>Device Name</td>
<td>string</td>
<td>Name of device</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Device Type</td>
<td>integer</td>
<td>Type of device</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Latitude</td>
<td>float</td>
<td>Latitude of location where device is installed</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Longitude</td>
<td>float</td>
<td>Longitude of location where device is installed</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>MAC Address</td>
<td>string</td>
<td>MAC address of the device</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Device Location</td>
<td>string</td>
<td>Full address of location where device is installed</td>
<td></td>
</tr>
</tbody>
</table>
Ex:

```json
{
    "operation_id": 1, //1 for adding 2 for updating
    "Device Name": "Lighting device",
    "Device Id": 18, //For parking default value will be 18
    "longitude": 77.5959877,
    "latitude": 12.981728,
    "Mac Address": "123456793",
    "device_location": "Gubbi Thotadappa Rd, Kempegowda, Sevashrama, Bengaluru, Karnataka 560023, India"
}
```

Response:

<table>
<thead>
<tr>
<th>Sl.no</th>
<th>Field</th>
<th>Data Type</th>
<th>Description</th>
<th>Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>status</td>
<td>String</td>
<td>True/false status</td>
<td></td>
</tr>
</tbody>
</table>

Ex:
**Success response:**

```json
{
    "success": "true",
    "message": "Device configured successfully"
}
```

**Failure response:**

```json
{
    "success": "false",
    "message": "Device not configured"
}
```

**REAL TIME DATA INTEGRATION**

Real Time Data Packet is sent from the Lighting Device to the Trinity IoT Hub through REST API on top of trinityIoT. The payload will be of JSON Object format which is explained below.
REST API:

http://IP:PORT/PSIMWebRestService/rest/lightingServices/sendLightingDetails

Request Type: POST,

Body Part:

{
    "DeviceMACId": null,
    "FeederIdentifier": "00000000-0000-0000-0000-000000000000",
    "FeederName": null,
    "TimeStamp": "0001-01-01T00:00:00",
    "PhaseL1Voltage": 0.0,
    "PhaseL2Voltage": 0.0,
    "PhaseL3Voltage": 0.0,
    "MainsVoltagesR": 0.0,
    "MainsVoltagesY": 0.0,
    "MainsVoltagesB": 0.0,
    "OutputVoltageU": 0.0,
    "OutputVoltageV": 0.0,
    "OutputVoltageW": 0.0,
    "PhaseWiseCurrentI1": 0.0,
    "PhaseWiseCurrentI2": 0.0,
    "PhaseWiseCurrentI3": 0.0,
    "Frequency": 0.0,
    "Phase1PowerFactor": 0.0,
    "Phase2PowerFactor": 0.0,
    "Phase3PowerFactor": 0.0,
    "TotalActivePower": 0.0,
    "TotalReactivePower": 0.0,
"TotalActiveEnergy": 0.0,
"TotalReactiveEnergy": 0.0,
"TotalKVAHEnergy": 0.0,
"ApparentPowerKVA": 0.0,
"MeteringKWhCumulative": 0.0,
"MeteringKVAhCumulative": 0.0,
"Temperature": 0.0,
"BatteryVoltage": 0.0,
"MCBTrip": 0,
"ContactorFailure": 0,
"DoorOpen": 0,
"GroundLeakage": 0,
"BatteryChargingVoltage": 0.0,
"ContactorStatus": 0,
"GSMSignalStrength": 0,
"GSMModemStatus": 0,
"Contactor": 0,
"DimmingSchedules": [
  {
    "StartTime": "2017-04-20T12:49:35.0791499+05:30",
    "EndTime": "2017-04-21T12:49:35.080151+05:30"
  }
],
"OperationSchedules": [
  {
    "StartTime": "2017-04-20T12:49:35.080151+05:30",
    "EndTime": "2017-04-21T12:49:35.080151+05:30"
  }
]
RESPONSE

Success response:

```json
{
    "success": "true",
    "message": "Data Received"
}
```

Failure response:

```json
{
    "success": "false",
    "message": "Failed to receive"
}
```

ENERGY CONSUMPTION

Data Packet is sent from the IoT Hub to the Lighting Application Server through Apache trinityIoT-publish-subscribe model. The payload will be of JSON Object format which is explained below.

**Topic**: LIGHTING
Payload: JSON Object

Payload Description:

Payload:

```json
{
  "LIGHTING": {
    "<PARAMETER>":<VALUE>,
    ...
    ...
    ...
    ...
  }
}
```