SENSIT Connect API Instructions

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CONTENTS

SENSIT CONNECT API CALLS

This document details the necessary API calls to extract data from SENSIT Connect.

PLEASE NOTE: This document has examples that may have different device types you are using. Please modify any location where it calls out a specific device type (SPOD, FMD, RAMP) to the device type that you are using. This is extremely important in the URL step. The document outlines the URLs for all three device types further down.

LOGGING IN/AUTHENTICATION

To get the authentication token from SENSIT Connect, send a HTTP POST to
https://api.sensitconnect.net/users/signin

The following stringified JSON needs to be included I the raw BODY of the POST.

{

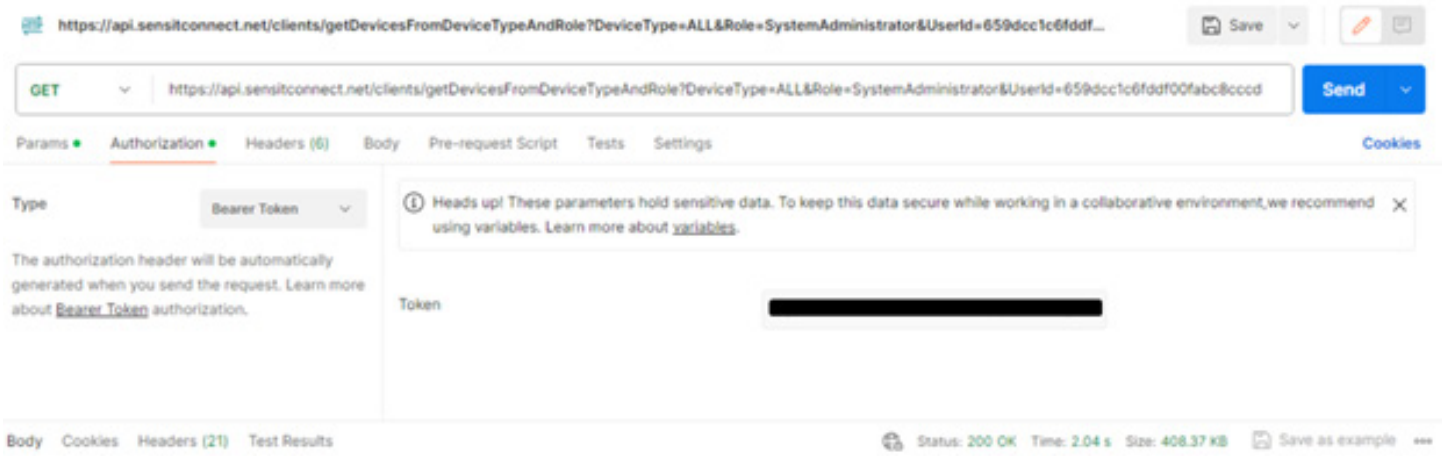
email: XXXX@XXXXX.XXX
password: XXXXXXX

}

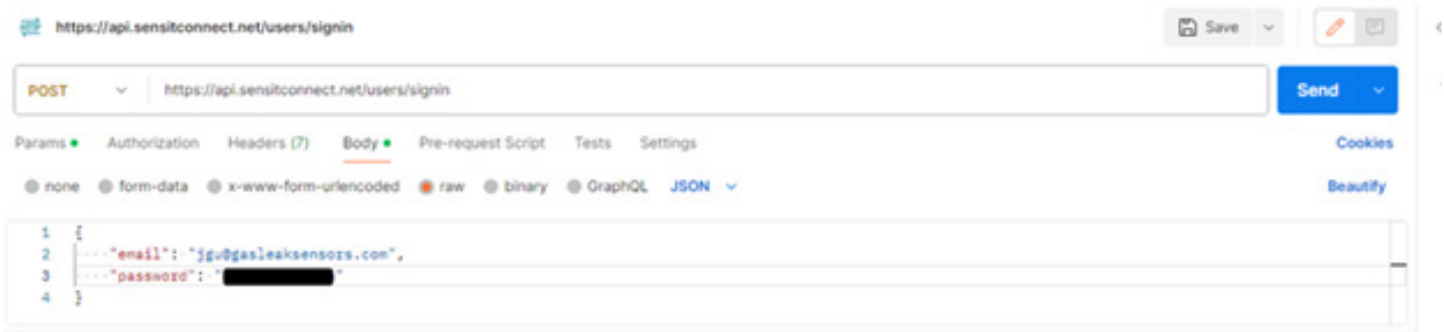
RESPONSE

The response of this POST is a JSON containing the following parameters. The most important parameters are the “id” within the “user” object, and “accessToken”.

All subsequent API calls will require the returned credentials, specifically “id” and “Token”. The token must be provided in the “Authorization” header of all HTTP POST or GETs.



POSTMAN EXAMPLE:



JAVASCRIPT EXAMPLE:

```
var key = “”
var SENSITConnect = “https://api.sensitconnect.net/users/signin”
var date = new Date()

    let params = {
        email: document.getElementById(“username”).value,
        password: document.getElementById(“password”).value
    }

    postData(SENSITConnect,params).then((data) => {
        console.log(data)         }
    })

async function postData(url = ‘’,data = {}){
    const response = await fetch(url,{
        method: “POST”,
        mode: “cors”,
        cache: “no-cache”,
```

```
        credentials: “same-origin”,
        headers: {
            “Content-Type”: “application/json”
        },
        redirect: “follow”,
        referrerPolicy: “no-referrer”,
        body: JSON.stringify(data)
    })

    return response.json()
}
```

PYTHON EXAMPLE:

```
import requests
import json

url = “https://api.sensitconnect.net/users/signin”

payload = json.dumps({
  “email”: “INPUT EMAIL HERE”,
  “password”: “INPUT PASSWORD HERE”
})
headers = {
  ‘Content-Type’: ‘application/json’
}

response = requests.request(“POST”, url, headers=headers, data=payload)

print(response.text)
```

GETTING DEVICES

Once you have the token, the user can query the historical data by device name. To get a list of devices assigned to the user, send a HTTP GET request to:

https://api.sensitconnect.net/clients/getDevicesFromDeviceTypeAndRole?

The following "PARAMS" need to be set:

Key	Value
DeviceType	ALL
Role	FROM LOGIN
UserId	FROM LOGIN

Note that the authorization header must be set with the bearer token, discussed in the logging in/ Authentication section.

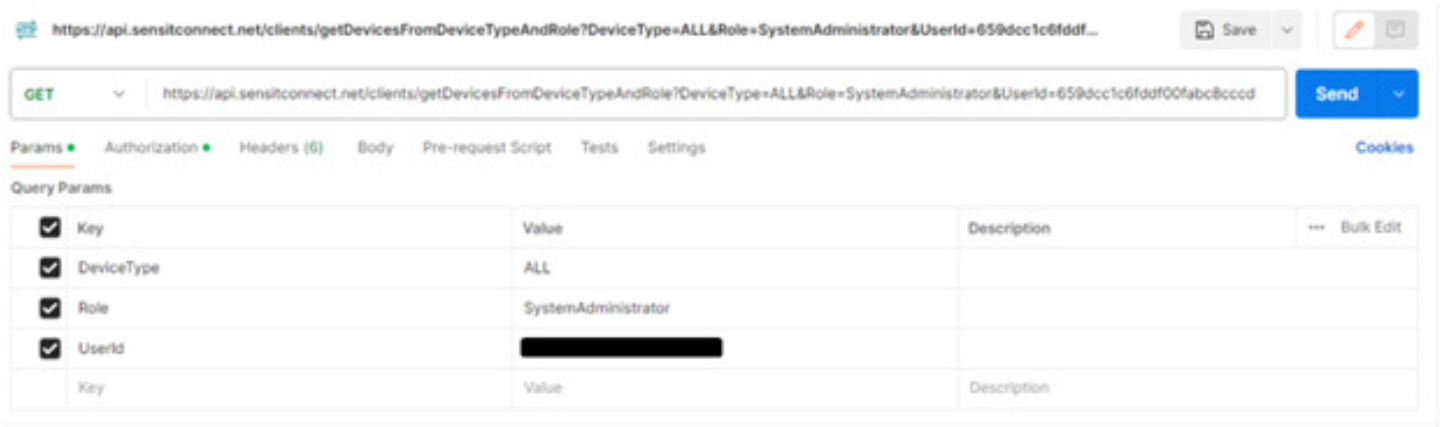
RESPONSE

The response will contain an array of Objects, each containing:

```
{
        "_id": "DEVICE ID",
        "uuid": "1041",
        "key": "",
        "name": "METEC 1041",
        "location": "Valparaiso",
        "picture": "",
        "status": "Active",
        "type": "DEVICE TYPE",
        "isUTCTimeZone": false,
        "isFirmwareUpdateRequire": false,
        "isCharging": false,
        "lastReceivedRecord": OBJECT CONTAINING THE LAST RECEIVED RECORD,
        "battery": 0
    }
```

The contents of "lastReceivedRecord" depends on the type of device. See the corresponding manual of the device for more information.

POSTMAN EXAMPLE



JAVASCRIPT EXAMPLE

```
getData(device_url.query,{
        DeviceType: "ALL",
        Role: login_cred.user.role,
        UserId: login_cred.user.id,
    },login_cred.accessToken).then((data) => {
        console.log(data)
        })
    })

async function getData(url = '',data = {},token = ''){
    get_url = url + new URLSearchParams(data)

    const response = await fetch(url + new URLSearchParams(data),{
        method: "GET",
        mode: "cors",
        cache: "no-cache",
        credentials: "same-origin",
        headers: {
            Authorization: "Bearer " + token
        },
        redirect: "follow",
        referrerPolicy: "no-referrer"
    })

    return response.json()
}
```

PYTHON EXAMPLE

```
import requests

url = "https://api.sensitconnect.net/clients/getDevicesFromDeviceTypeAndRole?Device-
Type=ALL&Role=SystemAdministrator&UserId=659dcc1c6fddf00fabc8cccd"

payload = ""
headers = {
  'Authorization': 'Bearer INSERT YOUR TOKEN HERE'
}

response = requests.request("GET", url, headers=headers, data=payload)

print(response.text)
```

GETTING HISTORICAL DATA

After device IDs associated with the account has been queried – historical data from the FMD can be queried using:

https://api.sensitconnect.net/sensors-data/getFMDDeviceLogForGivenHour

The following stringified JSON needs to be included I the raw BODY of the POST.

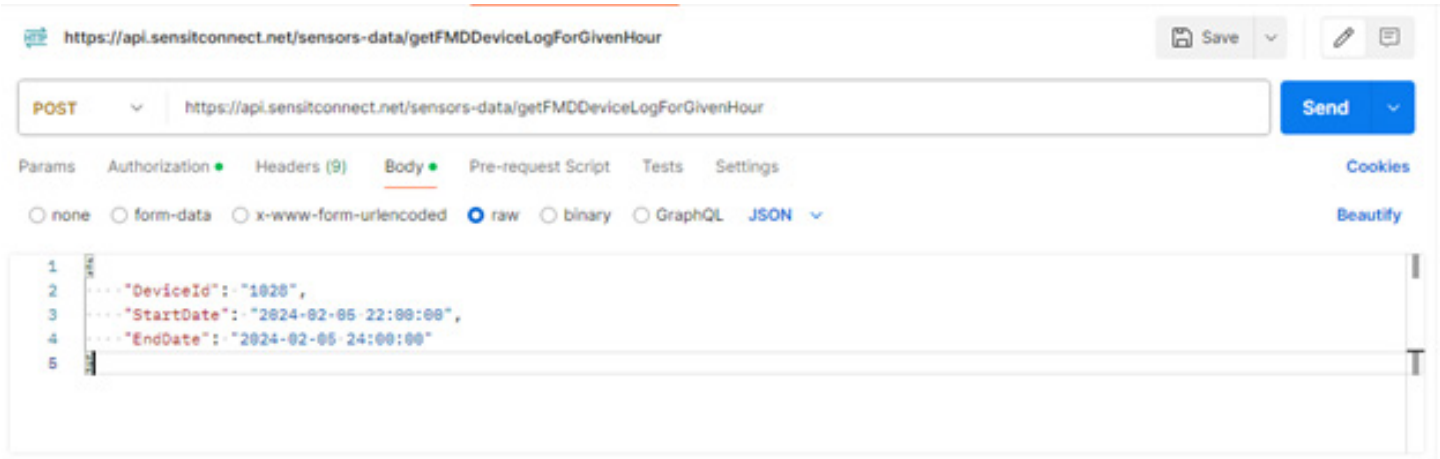
```
{
        "DeviceID": "INSERT YOUR DEVICE ID HERE"

        "StartDate": "INSERT YOUR START DATE HERE"

        "EndDate":  "INSERT YOUR END DATE HERE"

}
```

RESPONSE

The data response from this call is an array of JSON Objects, each containing parameters of the specific device type that was queried. See each corresponding manual for a dictionary of the returned parameters.


```
▼ historical: Array(15499)
  ▼ [0 … 9999]
    ▼ [0 … 99]
      ▼ 0:
          CH4: 0
          CH4_raw: 0
          WD: 152.7
          WS: 6.38
          crc: "4074323463"
          date: "2024-02-27T06:00:01.000Z"
          id: 1001
        ▶ laser: {EXT_STAT: 0, BIT_VAL: 146, TIME_AQ: 12, SENSITIVITY: 0}
          receivedCRC: "4074323463"
          settingCRC: "3292627380"
        ▶ stat: {SD_STATUS: 1000, unknown: 0, RS232Error: 0, RSSI: -74, SNR: 4, …}
          __v: 0
          _id: "65dd7aeebb37cb7f66e23f73"
        ▶ [[Prototype]]: Object
      ▶ 1: {_id: '65dd7aeebb37cb7f66e23f74', id: 1001, date: '2024-02-27T06:00:06.000Z', CH4: 0, WS: 5.49, …}
      ▶ 2: {_id: '65dd7aeebb37cb7f66e23f75', id: 1001, date: '2024-02-27T06:00:11.000Z', CH4: 0, WS: 5.2, …}
      ▶ 3: {_id: '65dd7aeebb37cb7f66e23f76', id: 1001, date: '2024-02-27T06:00:16.000Z', CH4: 0, WS: 5.84, …}
```


POSTMAN EXAMPLE



JAVASCRIPT EXAMPLE

PROVIDES DATA FOR A FULL DAY. EACH POST RETURNS DATA FOR 2 HOURS.

```
async function load_data(date,device){

    date.setHours(0)
    date.setMinutes(0)
    date.setSeconds(0)

    tmp_date = date
    tmp_data = []

    let url = data_url[device.type]

    for (let i=0;i<12;i++){
        start_date = tmp_date.setHours(2*i)
     startDate = tmp_date.getUTCFullYear() + '-' + (tmp_date.getUTCMonth() + 1) + '-' + tmp_date.
getUTCDate() + ' ' + tmp_date.getUTCHours() + ":00:00"
        end_date = tmp_date.setHours(2*(i+1))
     endDate = tmp_date.getUTCFullYear() + '-' + (tmp_date.getUTCMonth() + 1) + '-' + tmp_date.
getUTCDate() + ' ' + tmp_date.getUTCHours() + ":00:00"
        query = {
            "DeviceId":     device.uuid,
            "DeviceType":   device.type,
            "StartDate":    startDate,
            "EndDate":      endDate
        }

        if (start_date < new Date()){
            test_data = await postData(url,query,token)
            tmp_data = tmp_data.concat(test_data.data.reverse())
        }
    }

    return tmp_data
}

async function postData(url = '',data = {},token = ''){
    busy = 1

    const response = await fetch(url,{
        method: "POST",
        mode: "cors",
        cache: "no-cache",
        credentials: "same-origin",
        headers: {
            Authorization: "Bearer " + token,
            "Content-Type": "application/json"
        },
```

```
        redirect: "follow",
        referrerPolicy: "no-referrer",
        body: JSON.stringify(data)
    })

    busy = 0

    return response.json()
}
```

PYTHON EXAMPLE

```
import requests
import json

url = "https://api.sensitconnect.net/sensors-data/getFMDDeviceLogForGivenHour"

payload = json.dumps({
  "DeviceId": "1028",
  "StartDate": "2024-02-05 22:00:00",
  "EndDate": "2024-02-05 24:00:00"
})
headers = {
  'Content-Type': 'application/json',
  'Authorization': 'Bearer eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJlbWFpbCI6InN5c3RlbWFkbWluQHNlbnNpdGNvbm5lY3QubmV0Iiwicm9sZSI6IlN5c3RlbUFkbWluaXN0cmF0b3IiLCJkaXNwbGF5TmFtZSI6IlN5c3RlbSBBZG1pbiIsInN0YXR1cyI6IkFjdGl2ZSIsImlhdCI6MTcxMDM0MTk4MiwiZXhwIjoxNzEwMzcwNzgyfQ.nUTHyFfk9DbeVPXe31He2mrsG9ZS0HSgqPa-z02ipvk'
}

response = requests.request("POST", url, headers=headers, data=payload)

print(response.text)
```

GET DATES WITH AVAILABLE DATA

There is an API call for providing dates with available data. The API is an HTTP POST to:

Device Type	URL
FMD	https://api.sensitconnect.net/sensors-data/getFMDDataAvailableDates
SPOD	https://api.sensitconnect.net/sensors-data/getSPODDataAvailableDates
RAMP	https://api.sensitconnect.net/sensors-data/getRAMPDataAvailableDates

The following stringified JSON needs to be included in the BODY of the HTTP POST.

```
{
    "DeviceId": "INSERT YOUR DEVICE ID",
    "DeviceType": "INSERT YOUR DEVICE TYPE",
    "Timezone": "INSERT YOUR TZ IDENTIFIER TIMEZONE HERE.  E.G. America/Chicago"
}
```

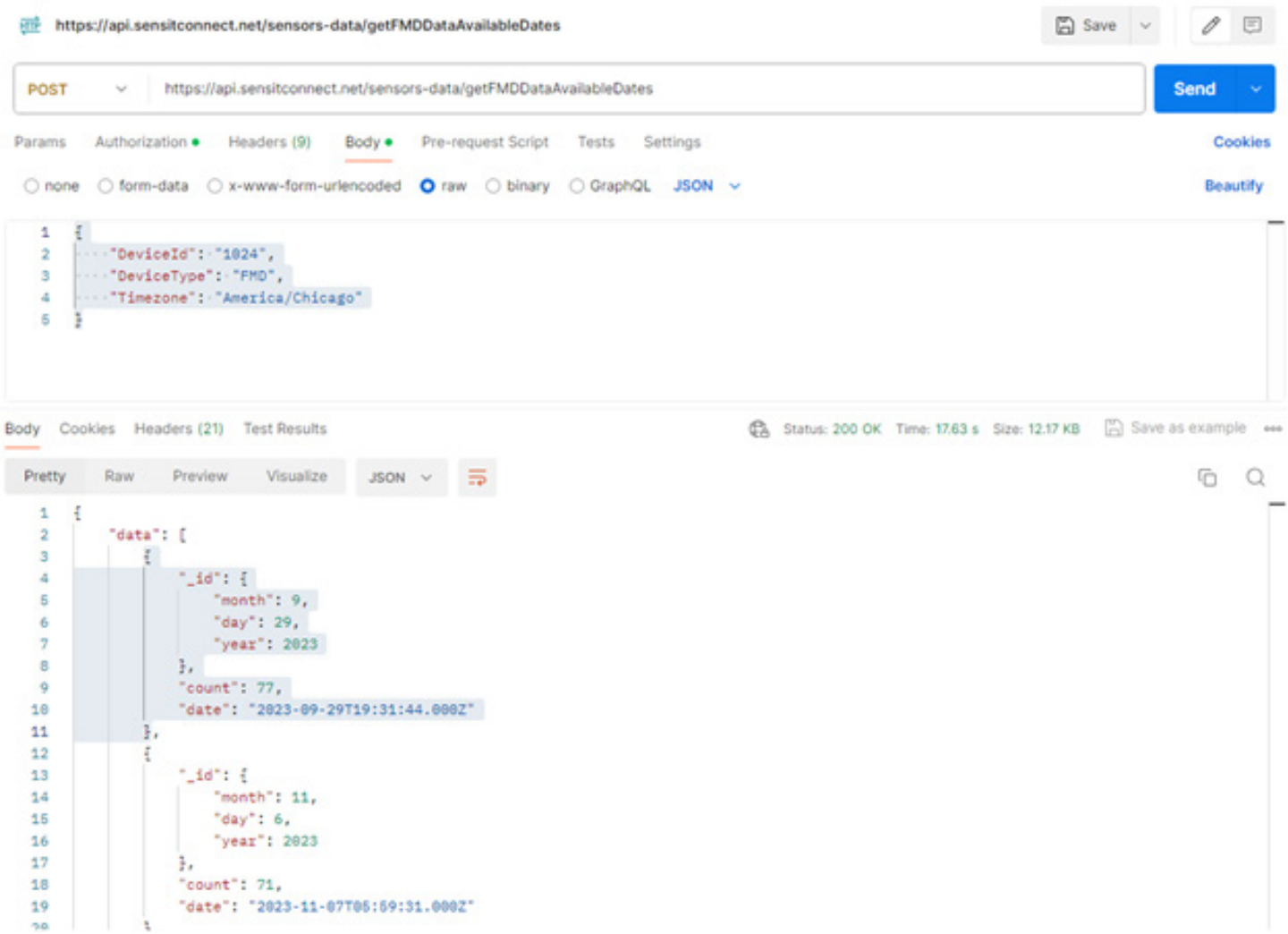
While SENSIT Connect works in UTC, the time zone is required because whether data is available on a given day is dependent on the timezone (i.e. data at 12/23/2023 1:30 EST is on 12/23/2023, but if queried in PST, it should be 12/22/2023).

RESPONSE

The data response from this HTTP POST is an array of JSON objects. A prototypical object is provided below:

```
{
        "_id": {
            "month": 9,
            "day": 29,
            "year": 2023
        },
        "count": # OF DATA POINTS AVAILABLE ON THIS DAY,
        "date": "LAST DATA POINT WITHIN THIS DAY"
}
```

POSTMAN EXAMPLE



JAVASCRIPT EXAMPLE

```
async function get_available(device){

    timezone = Intl.DateTimeFormat().resolvedOptions().timeZone

    let url = available_url[device.type]

    tmp_available = await postData(url,{
        "DeviceId": device.uuid,
        "DeviceType": device.type,
        "Timezone": timezone
    },token)

    return tmp_available
}
```

PYTHON EXAMPLE

```
import requests
import json

url = "https://api.sensitconnect.net/sensors-data/getFMDDataAvailableDates"

payload = json.dumps({
  "DeviceId": "1024",
  "DeviceType": "FMD",
  "Timezone": "America/Chicago"
})
headers = {
  'Token': 'Bearer INSERT YOUR BEARER TOKEN HERE',
  'Content-Type': 'application/json',
  'Authorization': 'Bearer eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJlbWFpbCI6InN5c3RlbWFkb-
WluQHNlbnNpdGNvbm5lY3QubmV0Iiwicm9sZSI6IlN5c3RlbUFkbWluaXN0cmF0b3IiLCJkaXNwbG-
F5TmFtZSI6IlN5c3RlbSBBZG1pbiIsInN0YXR1cyI6IkFjdGl2ZSIsImlhdCI6MTcxMDM0MTk4MiwiZXhwIjox-
NzEwMzcwNzgyfQ.nUTHyFfk9DbeVPXe31He2mrsG9ZS0HSgqPa-z02ipvk'
}

response = requests.request("POST", url, headers=headers, data=payload)

print(response.text)
```

NOTES

NOTES

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