

eTax Multi-Vendor Monitoring System

eTax Monitoring System Features:

- 1- Tracking the current location of each POS.
- 2- Ticketing System that tracks all current problems.
- 3- Tracking approved and rejected transactions count per each batch for each merchant.
- 4- Tracking if the terminal is Up-To-Date regarding Configuration, Software, and Firmware.
- 5- Checking if Current POS is turned on or off.
- 6- Getting data on both Sims.
- 7- Exporting Reports to Excel Files. **eTax Monitoring System prerequisite:**

- 1- Implementing this request inside of the code and Connect to the server.
- 2- Getting all the parameters needed from the POS and implement it inside of the request message.
- 3- Creating a Statistics Message that Connects to this Monitoring System every 10 or x minutes.
- 4- To Support checking if terminal is Up-To-Date feature POS must check with its TMS if firmware, software and configuration updated or not.
- 5- Implementing a Ticketing Open Menu in the terminal.
- 6- Implementing a Ticketing Enquiry Menu.
- 7- Implementing a Ticket Visit Menu that takes the ID of the Technician and Password Protected.

Request Message:

<https://tms.etax.com.eg/api/Request/MonitoringSystem>

Content-Type: application/json

Request Post

Data is in Json Format

JSON Data Example:

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```
{
  "Vendor": "NEWLAND",
  "TermType": "smartBox V7",
  "TermSerial": "74B00296372611",
  "TermOS": 1,
  "StatMsgInterval": "201236",
  "Firmware_Ver": "8.0.0",
  "Firmware_UTD": 1,
  "Firmware_LUDT": "01/12/2019 15:07:03",
  "Software_Ver": "2.0.0",
  "Software_UTD": 1,
  "Software_LUDT": "01/12/2019 15:07:03",
  "AppData": [
    {
      "TermID": "22930010",
      "MerchantID": "511426119",
      "MasterApp": true,
      "Config_Ver": "1",
      "Config_UTD": true,
      "Config_LUDT": "01/12/2019 15:07:03",
      "BatchData": [
        {
          "BatchNo": 1,
          "ApprovedTrans": 8,
          "RejectedTrans": "81,7,05,3,04,9"
        },
        {
          "BatchNo": 2,
          "ApprovedTrans": 20,
          "RejectedTrans": "81,1,05,2,04,1"
        }
      ]
    },
    {
      "TermID": "22930011",
      "MerchantID": "229300",
      "MasterApp": 0,
      "Config_Ver": "10",
      "Config_UTD": 1,
      "Config_LUDT": "03/12/2019 15:07:03",
      "BatchData": [
        {
          "BatchNo": 4,
          "ApprovedTrans": 5,

```

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```
        "RejectedTrans": "91,4,05,2,04,6"
      },
      {
        "BatchNo": 5,
        "ApprovedTrans": 25,
        "RejectedTrans": "91,2,05,1,04,3"
      }
    ]
  },
  ],
  "TNeeded": false,
  "TEnquiry": false,
  "TChoosed": 4,
  "TicketID": 0,
  "TVisit": false,
  "TVisitorId": 50,
  "SimData": [
    {
      "SimSerial": "8920022022651206251",
      "SimMCCMNC": 60202,
      "SimSuccConnCount": 10,
      "SimChangedCount": 2,
      "CurrentSim": 1,
      "LocalIP": "192.168.1.5"
    },
    {
      "SimSerial": "8920018517200872509",
      "SimMCCMNC": 60201,
      "SimSuccConnCount": 30,
      "SimChangedCount": 4,
      "CurrentSim": 0
    }
  ],
  "CellTowersData": [
    {
      "MCC": 602,
      "MNC": 2,
      "LAC": 31201,
      "CID": 7876094,
      "SigStrength": -80
    },
    {
      "MCC": 602,
      "MNC": 2,
```

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```
"LAC":31201,  
"CID":7876096,  
"SigStrength":-90  
}  
],  
"Longitude":31.1840318245614,  
"Latitude":30.0023239385965  
}
```

Terminal Info:**Vendor:**

The Name of Vendor.

TermType:

Type of Terminal.

TermSerial:

Terminal Serial Number.

TermOS:

Terminal Operating System (0 For Linux – 1 For Android – 2 For Windows – 3 For IOS – 4 For MAC).

StatMsgInterval:

The Interval Time between each statistics Message formatted as (HHMMSS).

Versioning:**Software_Ver:**

Software Version.

Software_UTD:

Software Is Up-To –Date or not (bool).

*eTax Monitoring System***Software_LUdT:**

Software Latest Update Date-Time.

Firmware_Ver:

Firmware Version.

Firmware_UTD:

Firmware Is Up-To –Date or not (bool).

Firmware_LUdT:

Firmware Latest Update Date-Time.

App Data:

Array of Applications, for Multi Merchant Terminals, an application for each merchant.

TermID:

Terminal ID **MerchantID:**

Merchant ID **MasterApp:**

Application Is the Master App or not and there must be only one master(bool).

Config_Ver:

Configuration Version.

Config_UTD:

Configuration Is Up-To –Date or not (bool).

Config_LUdT:

Configuration Latest Update Date-Time.

Batch Data:

Array of Batch Data objects must have at least two elements Previous and Current batch but only in case of there is no previous batch send just the current.

BatchNo:

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Batch No.

ApprovedTrans:

Count of Approved Transactions.

RejectedTrans:

Count of Rejected Transactions, set as CSV
(RejectedTransResponseCode,Count).

Ticketing:**TNeeded:**

This Request was meant to open ticket or not (bool).

TEnquiry:

This Request was meant to enquiry on an opened ticket or not (bool).

TChoosed:

This is an Integer each bit represent a certain issue to open according to the enum.

TicketID:

This is used to enquire on a certain ticket using its TicketId.

TVisit:

This Request was meant to submit that the ticket was visited by Technician(bool).

TVisitorId:

This is Set using the ID of the Technician.

*eTax Monitoring System***Ticketing Rules:**

- If **Tneeded**, **Tenquiry**, and **TVisit** was set to true **TNeeded** has the higher priority.
- In case of **Tneeded**
 - o If the Ticket was opened successfully:
 - ✦ Response Code: 201
 - o If the Ticket Failed To Open:
 - ✦ Response Code: 204
 - o In both cases:
 - ✦ Headers:
 - Content: TicketOpen_
 - Data: Json Data as an array of objects (Refer to Ticket Object).
- In Case of **Tenquiry**
 - o If Ticket Found:
 - ✦ Response Code: 200
 - o If Ticket Not Found:
 - ✦ Response Code: 404
 - o If Found or Not Found ✦ Headers:
 - Content: TicketEnquiry_
 - Data: Json Data as an array of objects (Refer to Ticket Object).
 - o If Both **TChooosed** and **TicketID** is zero, it will return all tickets opened for this terminal

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- If **TChooesd** is not Zero, it will return the selected Tickets set.
- If **TicketID** is not zero, it will return the selected Ticket.
- In Case of **TVisit**
 - **TvisitorId** must be set using the Id of the Technician who visited the Terminal.
 - Return Header:
 - ✦ Content: TicketVisit_
 - ✦ Data: Json Data as an array of objects (Refer to Ticket Object).
 - If **TvisitorId** wasn't found:
 - ✦ Response Code: 403
 - If **Ticket** wasn't found:
 - ✦ Response Code: 404
 - If ID was found:
 - ✦ Response Code: 200
 - If **TChooesd** is not Zero, it will return the selected Tickets set.
 - If **TicketID** is not zero, it will return the selected Ticket.
 - Else
 - ✦ Response Code: 400

Ticket Object:

```

[ {
  "Ticket_ID":10,
  "TerminalSerialNmbr":"J74B00296393",
  "Error_Name":"Printer_Error",
  "Auto_Entry":0,
  "User_Assigned":"",
  "Progress":"NEW",
  "Date_Received":"Nov 19 2019 7:36PM",
  "Start_Work_Date":"",
  "Visit_Date":"",
  "Closed_Date":""
} ] Ticket

```

Enum:**enum Errors**

```

{
  HOST_Unavailable = 1 << 0,
  No_Paper_Roll = 1 << 1,
  Printer_Error = 1 << 2,
  Magnetic_Error = 1 << 3,
  Chip_Reader_Error = 1 << 4,
  Contactless_Error = 1 << 5,
}

```


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```
Screen_Error    =    1 << 6,  
Keyboard_Error  =    1 << 7  
};
```

Sim Data:

Array of Sim Data Object for each sim in terminal.

SimSerial:

The Sim Serial Number.

SimMCCMNC:

The Sim MCC and MNC combined (ex: 60202) **SimSuccConnCount:**

Count of number Successfull Connection.

SimChangedCount:

Count of how many times this sim was changed.

CurrentSim:

Is this the currently connected Sim (bool).

LocalIP:

The Local Ip that the sim has taken when Connected, leave it as null if not connected.

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Cell Towers Data: (For terminals that doesn't support GPS)

Array of Cell Tower Data Object for each tower, the terminal is connected to.

MCC:

Mobile Country Code.

MNC:

Mobile Network Code.

LAC:

Location Area Code.

CID:

Cell ID.

SigStrength:

The Signal Strength (Must be less than Zero).

*eTax Monitoring System***Location Data: (For terminals that supports GPS)** Location

Of Terminal that supports GPS.

Longitude:

Longitude of Terminal Location.

Latitude:

Latitude of Terminal Location.

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