

105 - EMS Panel Controller API

Brief

Communication API between **Panel Controller + EMS Server** and **M2M Platform**.

Controller + EMS Server API

SEMUA REQUEST DI DOKUMEN INI HANYA CONTOH AJA, SLA BEBAS GIMANA GENERATENYA. YANG PENTING RESPONSENYA SESUAL.

REST API.

1. Register Panel Controller
 1. Request: **CONTOH**
 1. **192.168.128.69/emma/register?mac=18fe349936be&hmac=94ecb03413ae05c0af6202e6f8e7eea1**
 2. Notes:
 1. 192.168.128.69 is IP address of EMS server
 2. 18fe349936be is WiFi MAC address of Controller
 3. 94ecb03413ae05c0af6202e6f8e7eea1 is MD5 hash code
 2. Response:
 1. Success (200):
`[{"platformDomain":"(2da0575fc6dacf4205ce8174e7b3163b)","platformKey":"(5980e444-81dd-47ba-8222-6a40bc94fdce)","platformSecret":"(3ca8ec0239fda2b6d12ba1580c91a052)","registrationKey":"(abc123)"}]`
 2. Failed (400): if parameter "hmac" not exist and if MD5 hash not valid
 3. Notes:
 1. Format in JSON
 2. Parameter *platformDomain*, *platformKey*, and *platformSecret* are generated by M2M platform(**2lemetry**) and also saved by EMS Server
 3. Those parameters are permanent for app (supposedly), except *registrationKey*
2. Verify Registration
 1. Request: **CONTOH**
 1. **192.168.128.69/emma/verify?mac=18fe349936be®istrationKey=abc123&hmac=77cea1525e9ed70f4ce4e972feb1b104**
 2. Notes:
 1. 18fe349936be is WiFi MAC address of Controller
 2. abc123 is registration key
 3. 77cea1525e9ed70f4ce4e972feb1b104 is MD5 hash code
 2. Response:
 1. Success (200): **`[{"status":"registered"}]`**
 2. Success (200): **`[{"status":"not registered"}]`** if registration not verified yet
 3. Failed (400): if parameter "mac" or "hmac" or "registrationKey" not exist or MD5 hash not valid
 4. Notes:
 1. Format in JSON

3. Send Device (IR&RF Remote) List - **Not yet**
 1. Request:
 2. Response:

Controller + M2M Platform API

SEMUA REQUEST DI DOKUMEN INI HANYA CONTOH AJA, SLA BEBAS GIMANA GENERATENYA. YANG PENTING RESPONSENYA SESUAL.

M2M Platform yang dipakai 2lemetry.com . Jadi, nanti untuk kirim data dan dapat command, panel controller akses dari 2lemetry. 2lemetry juga menyediakan API untuk dapat data dan publish command dari EMS Server (backend server yang dibikin SLA). Nanti aplikasi web akses data dari EMS Server.

MQTT API.

1. Subscribe Command

1. Topic:

1. **<platformDomain>/<WiFi MAC>/command**

2. Response:

1. Example

1. **[{"id":"123","dType":1,"dAddr":"00262903424E","nType":21,"cmd":1}]**
2. **[{"id":"456","dType":1,"dAddr":"00262903424F","nType":11,"cmd":20}]**
3. **[{"id":"789","dType":0,"dAddr":"8","nType":0,"cmd":1}]**

2. Notes:

1. *id* is command id
2. *dType* is device type
 1. *dType* = 0 is for switch on Panel Controller
 2. *dType* = 1 is for device with MAC address (IR&RF Remote)
3. *dAddr* is device address
 1. If *dType* = 0 → *dAddr* is switch channel (0-15)
 2. If *dType* = 1 → *dAddr* is MAC address
4. *nType* is node type
 1. Node type. If *dType* = 0 → Ignore, *dType* = 1 → node(e.g. AC, TV, RF Switch)

<i>nType</i>	node
0	Ignore
10	AC LG
11	AC Sharp
1x	...
20	TV LG
21	TV Sharp
2x	...
90	RF Switch

5. *cmd*

1. 0 is turn OFF
2. 1 is turn ON
3. 18 - 30 are specific for Air Conditioner (it represents temperature in Celcius)

2. Publish Execution Status

1. Topic:

1. **<platformDomain>/<WiFi MAC>/cmdExecution**

2. Payload:
 1. Success:
[{"id": "123", "dType": 1, "dAddr": "00262903424E", "nType": 21, "cmd": 1, "status": "success"}]
 2. Failed:
[{"id": "123", "dType": 1, "dAddr": "00262903424E", "nType": 21, "cmd": 1, "status": "failed"}]
3. Publish Data
 1. Topic:
 1. **<platformDomain>/<WiFi MAC>/<sensor>**
 2. Sensor example: temperature, humidity, gas, energy1, energy2, energy3, etc.
 2. Payload
 1. **[{"time": "20150609-12:32:12", "value": 12.34}]**