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Title: Middleware REST API documentation (e-IoT.eu)

Comments: This document contains 11 URLs in 6 chapters.

A 2 Urls, B 3 URLs, C 3 URLs, D 1 URL, E 1 URL, F 1 URL

### A. refers to ... Parameters of a device

1. URL = <http://iot-get.e-iot.eu/getparams.aspx?a=xxx-xxx&c=xxxx>

a = application id (guid)

c = device id (guid)

response(approved) = xml + <endOfData>

response(approved) example =

```
<Record>
  <InterValA>30000</InterValA>
  <InterValD>30000</InterValD>
  <InterValP>120000</InterValP>
  <InterValR>30000</InterValR>
  <Command>192.168.1.109</Command>
</Record><endOfData>
```

InterValA = Analog pins clock (integer, milliseconds eg 30000)

InterValD = Digital pins clock (integer, milliseconds eg 30000)

InterValP = Parameters clock (integer, milliseconds eg 120000)

InterValR = Relays pins clock (integer, milliseconds eg 30000)

Command = Response of a Command

response(rejected) = <Record> + </False> + <endOfData>

response(rejected) example = <Record></False><endOfData>

2. URL = <http://iot-get.e-iot.eu/setparams.aspx?a=xxx-xxx&c=xxxx&dA=xxxx&dD=xxxx&dP=xxxx&dR=xxxx&cmd=xxxx>

a = application id (guid)

c = device id (guid)

dA = Analog pins clock (integer, milliseconds eg 30000)

dD = Digital pins clock (integer, milliseconds eg 30000)

dP = Parameters clock (integer, milliseconds eg 120000)

dR = Relays pins clock (integer, milliseconds eg 10000)

cmd = Commands to be executed in the device

response(approved) = </True> + <endOfData>

response(approved) example = </True><endOfData>

response(rejected) = </False> + <endOfData>

response(rejected) example = </False><endOfData>

### B. refers to ... Sensors of a device

1. URL = <http://iot-get.e-iot.eu/getsensorevalue.aspx?a=xxx-xxx&c=xxxx&p=xx>

a = application id (guid)

c = device id (guid)

p = pin (eg 01)

response(approved) = alarm + ; + value + <endOfData>

alarm = 0 or 1

response(approved) example = 0;3.69<endOfData>

response(rejected) = 0 + ; + 0 + <endOfData>

response(rejected) example = 0;0<endOfData>

2. URL = <http://iot-get.e-iot.eu/getsensorsnaps.aspx?a=xxx-xxx&c=xxxx&p=xx&y=xxxx&m=xx&d=xx>

a = application id (guid)

c = device id (guid)

p = pin (eg 01)

y = year (4 digits)

m = month (2 digits)

d = day (2 digits)

response(approved) = xml + <endOfData>

response(approved) example =

```
<Database>
  <SensorsSnapshots>
    <Snapshot>
      <Id>02699326-e662-4d1b-b986-7cab18e28371</Id>
      <Controller>102</Controller>
      <RegDateTime>2022/01/09 23:55:06</RegDateTime>
      <IOTValue>0.81</IOTValue>
      <IOTms>30000</IOTms>
      <Value>0.81</Value>
      <Alarm>0</Alarm>
      <Pin>00</Pin>
      <Comments></Comments>
    </Snapshot>
    <Snapshot>
      <Id>02699326-e662-4d1b-b986-7cab18e28371</Id>
      <Controller>102</Controller>
      <RegDateTime>2022/01/09 24:20:09</RegDateTime>
      <IOTValue>1.05</IOTValue>
      <IOTms>30000</IOTms>
      <Value>1.05</Value>
      <Alarm>0</Alarm>
      <Pin>00</Pin>
      <Comments></Comments>
    </Snapshot>
  </SensorsSnapshots>
</Database><endOfData>
```

Id = record id (guid)  
 Controller = device id (guid)  
 RegDateTime = date and time of raw record registration (yyyy/MM/dd HH:mm:ss)  
 IOTValue = value of raw record (float)  
 IOTms = frequency of one telemetry in milliseconds (time distance between mesurments) (integer eg 30000)  
 Value = value after calibration (float)  
 Alarm = alarm (0 or 1)  
 Pin = pin (eg 00)

Comments = comments (string)  
 response(rejected) = <Database> + <SensorsSnapshots> + </False> + <endOfData>  
 response(rejected) example = <Database><SensorsSnapshots></False><endOfData>

- URL = <http://iot-get.e-iot.eu/insertSensorValue.aspx?application=xxx-xxx&controller=xxxx&pin=xx&value=xx&ms=xxxx>  
 application = application id (guid)  
 controller = device id (guid)  
 pin = pin (eg 01)  
 value = value to be inserted  
 ms = frequency of one telemetry in milliseconds (time distance between mesurments) eg 60000  
 response(approved) = <True/endOfData>  
 response(approved) example = <True/endOfData>  
 response(rejected) = error string + <False/endOfData>  
 response(rejected) example = Input string was not in a correct format.<False/endOfData>

### C. refers to ... Actuators of a device (eg Relays)

- URL = <http://iot-get.e-iot.eu/getrelayvalue.aspx?a=xxx-xxx&c=xxxx&p=xx>  
 a = application id  
 c = device id  
 p = pin (eg 50)  
 response(approved) = value + ; + ms + <endOfData>  
 value = 0 or 1  
 ms = period in milliseconds for an actuator to remain closed (sw=0/open/off sw=1/closed/on)  
 response(approved) example = 0;0<endOfData>  
 response(rejected) = -1 + <endOfData>  
 response(rejected) example = -1<endOfData>

- URL = <http://iot-get.e-iot.eu/getrelaysnaps.aspx?a=xxx-xxx&c=xxxx&p=xx&y=xxxx&m=xx&d=xx>  
 a = application id (guid)  
 c = device id (guid)  
 p = pin (eg 01)  
 y = year (4 digits)  
 m = month (2 digits)  
 d = day (2 digits)  
 response(approved) = xml + <endOfData>  
 response(approved) example =

```
<Database>
  <RelaysSnapshots>
    <Snapshot>
      <Id>02699326-e662-4d1b-b986-7cab18e28371</Id>
      <Controller>102</Controller>
      <RegDateTime>2022/01/09 23:55:06</RegDateTime>
      <ms>0</ms>
      <Value>0</Value>
      <replays>0</replays>
      <Pin>50</Pin>
    </Snapshot>
    <Snapshot>
      <Id>02699326-e662-4d1b-b986-7cab18e28371</Id>
      <Controller>102</Controller>
      <RegDateTime>2022/01/09 24:20:09</RegDateTime>
      <ms>3000</ms>
      <Value>1</Value>
      <replays>0</replays>
      <Pin>50</Pin>
    </Snapshot>
  </RelaysSnapshots>
</Database><endOfData>
```

Id = record id (guid)  
 Controller = device id (guid)  
 RegDateTime = date and time of raw record registration (yyyy/MM/dd HH:mm:ss)  
 ms = period in milliseconds for an actuator to remain closed (sw=0/open/off sw=1/closed/on)  
 Value = value (0 or 1) (sw=0/open/off sw=1/closed/on)  
 replays = replays  
 Pin = pin (eg 50)  
 response(rejected) = <Database> + <RelaysSnapshots> + </False> + <endOfData>  
 response(rejected) example = <Database><RelaysSnapshots></False><endOfData>

- URL = <http://iot-get.e-iot.eu/insertRelayValue.aspx?application=xxx-xxx&cmd=xxx&controller=xxxx&pin=xx&value=xx&ms=xxxx&rep=x>  
 application = application id (guid)  
 cmd = command (Insert or Update)  
 controller = device id (guid)  
 pin = pin (string eg 01)  
 value = value to be inserted (float)  
 ms = period in milliseconds for an actuator to remain closed (sw=on/closed sw=off/open) (integer eg 3000)

```

rep = repeats (string)
response(approved) = <True/endTime>
response(approved) example = <True/endTime>
response(rejected) = error string + <False/endTime>
response(rejected) example = Object reference not set to an instance of an object<False/endTime>

```

#### D. refers to ... Auxiliaries

```

1. URL = http://iot-get.e-iot.eu/getshortcut.aspx?a=xxx-xxx&c=xxxx&s=xxx-xxx
a = application id (guid)
c = device id (guid)
s = Relation (string)
response(approved) = Value String + <endTime>
response(approved) example = SensorsSnaps.Value > 300 And SensorsSnaps.Value < 600 And<endTime>
response(rejected) = </False> + <endTime>
response(rejected) example = </False><endTime>

```

#### E. refers to ... Positioning

```

1. URL = http://iot-get.e-iot.eu/gps.aspx?voucher=xxx-xxx&lo=xxx.xxx&la=xxx.xxx&fun=Xxxx
voucher = vouche id (guid)
lo = longitute (float)
la = latitute (float)
fun = False or 'else' (string) if(fun==False) InsertPositioning() else UpdatePositioning()
response(approved) = <True/endTime>
response(approved) example = <True/endTime>
response(rejected) = <False/endTime>
response(rejected) example = <False/endTime>

```

#### F. refers to ... Activities

```

1. URL = http://iot-get.e-iot.eu/getzoomdata.aspx?u=xxxx@xxxx.xx&p=xxxx
u = eMail (User)
p = Password
response(approved) = xml + <endTime>
response(approved) example =
    <Database>
      <Events>
        <Event>
          <Id>060767a1-ac70-4119-bb71-056874c356</Id>
          <Description>Temperature Monitoring</Description>
          <Block>b1003</Block>
          <Vouchers>
            <Voucher>
              <Id>0539f27e-20d6-400e-8224-959a67d38867</Id>
              <Description>Temperature</Description>
              <Dashboard>https://e-iot.eu/dash-board?application=732736-83736-8373763&block=b1003</Dashboard>
            </Voucher>
          </Vouchers>
        </Event>
      </Events>
    </Database><endTime>
Event
  Id = Activity/Id
  Description = Activity/Description
  Block = Activity/IoT/Block/Id
Voucher
  Id = Participations/Vaoucher/Id
  Description = Participations/Vaoucher/Description
  Dashboard = Participations/Vaoucher/IoT/Dashboard URL
response(rejected) = <Database> + </Database> + <endTime> or </False> + <endTime>
response(rejected) example = <Database></Database><endTime>

```