ModbusIPE for tinyIoT

Project environment

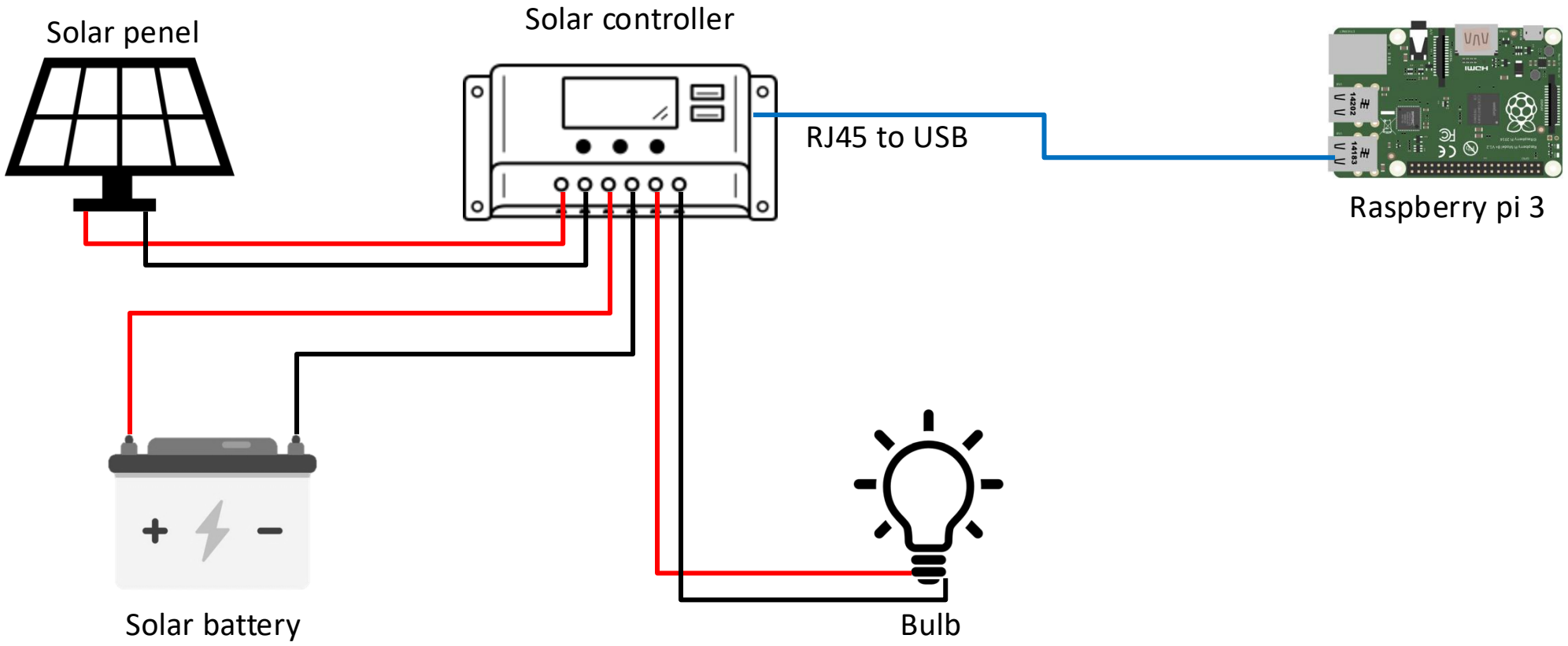
H/W

- raspberry pi 3 (raspberry pi 4 is not woking)
- Solar panel
- Battery
- Solar controller
- RJ45 to USB A cable

S/W

- Node.js 18.x
- Raspberry pi OS (Legacy, 32-bit)
- https://github.com/seslabSJU/ModbusIPE.git

Circuit configuration



Project setup

1 . Check Exr driver installation

- https://github.com/seslabSJU/ModbusIPE/blob/main/doc/%EC%86%94%EB%9D%BC%EC%82%AC%EC%9D%B4%EB%8B%88%EC%A7%80_%EB%A7%A4%EB%89%B4%EC%96%BC.pdf
- Follow this document “4-3 Modbus driver install”

2. package install

- Git clone https://github.com/seslabSJU/ModbusIPE.git
- npm install in ModbusIPE folder

3. create resource

- Create resource(AE and CNT) before running project
- Refer to pages 5,6 for the resource tree

Project setup

4. set config.js

ModbusIPE / config.js

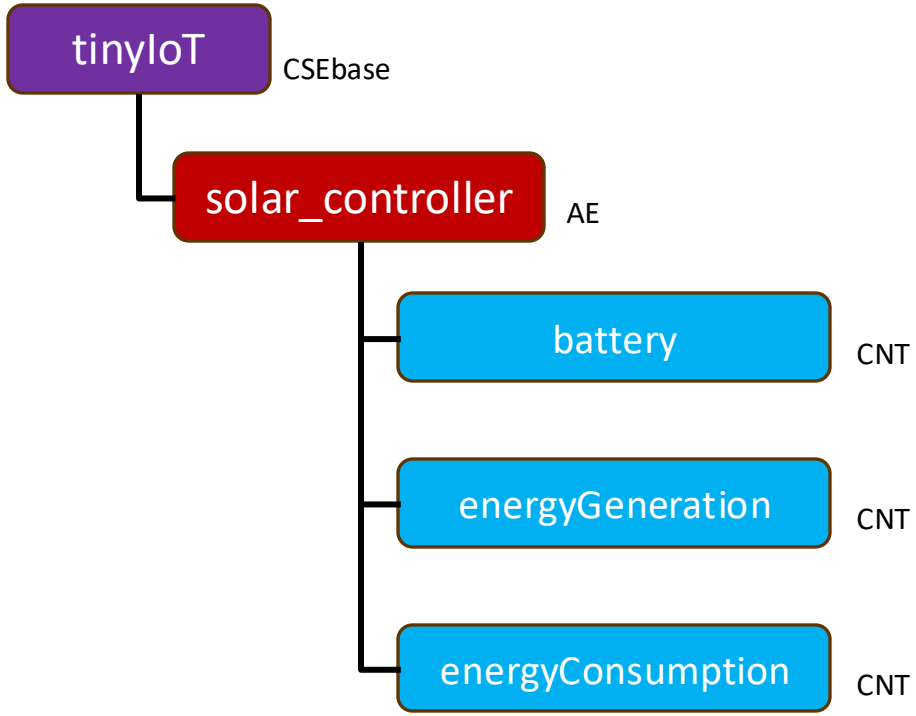
hyeonseo0128 first commit

Code Blame 16 lines (14 loc) · 331 Bytes

```
1   export const slaveConfig = {
2       port: "/dev/ttyXRUSB0",
3       baudRate: 115200,
4       parity: "none",
5       dataBits: 8,
6       stopBits: 1
7   };
8
9   export const cseUrl = 'http://192.168.0.127:3000/TinyIoT';
10
11  export const resourceConfig = {
12      AE_NAME: 'solar_controller',
13      AE_ORIGIN: 'CAdmin',
14      API: 'NsorlarController',
15      RR: true
16  }
```

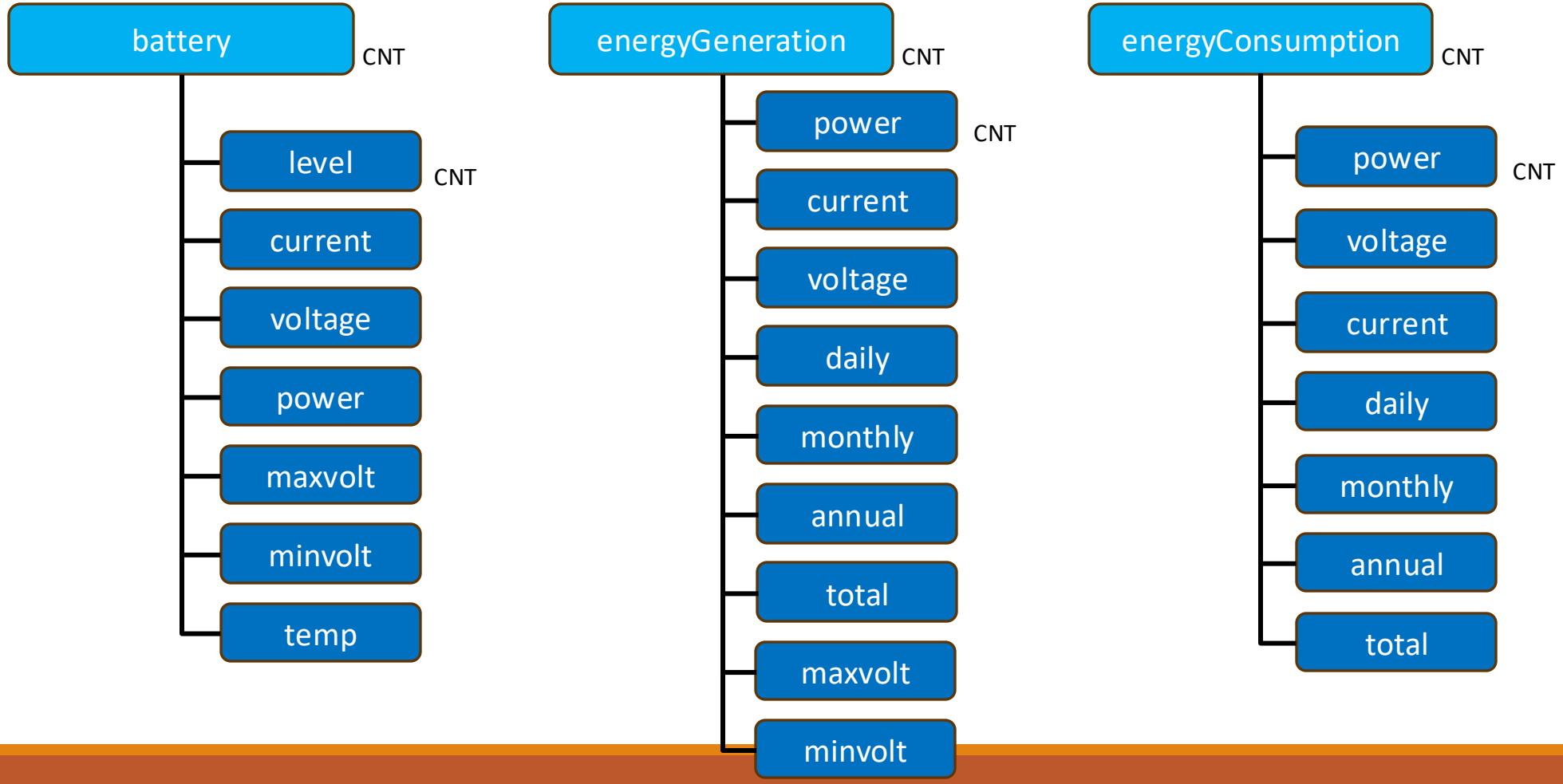
Fill in this Area to
Your environment

Resource Tree

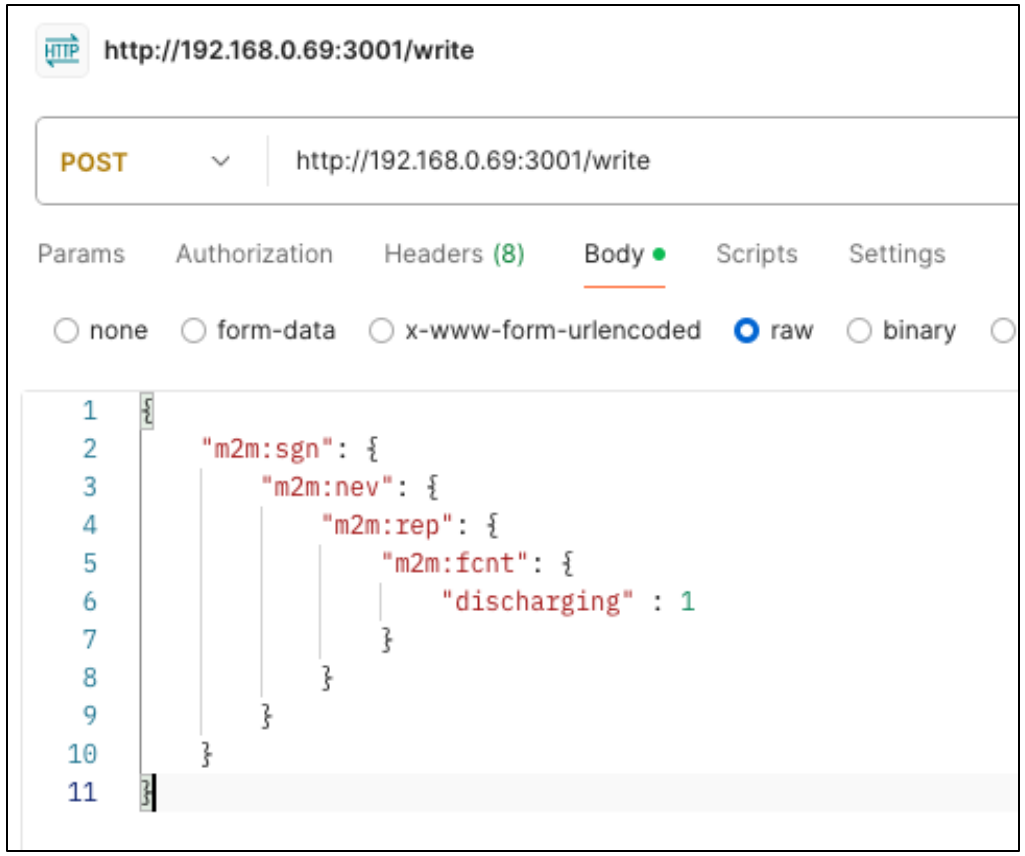



```
read  battery  :  {
  level: 100,
  current: 0.16,
  voltage: 13.72,
  power: 2.96,
  maxvolt: 13.74,
  minvolt: 13.6,
  temp: 30.81
}
read  energyGeneration  :  {
  power: 2.96,
  current: 0.18,
  voltage: 18.59,
  daily: 0,
  monthly: 0.12,
  annual: 0.12,
  total: 0.12,
  maxvolt: 19.33,
  minvolt: 18.55
}
read  energyConsumption  :  {
  power: 0.13,
  voltage: 13.72,
  current: 0.01,
  daily: 0,
  monthly: 0,
  annual: 0,
  total: 0
}
```

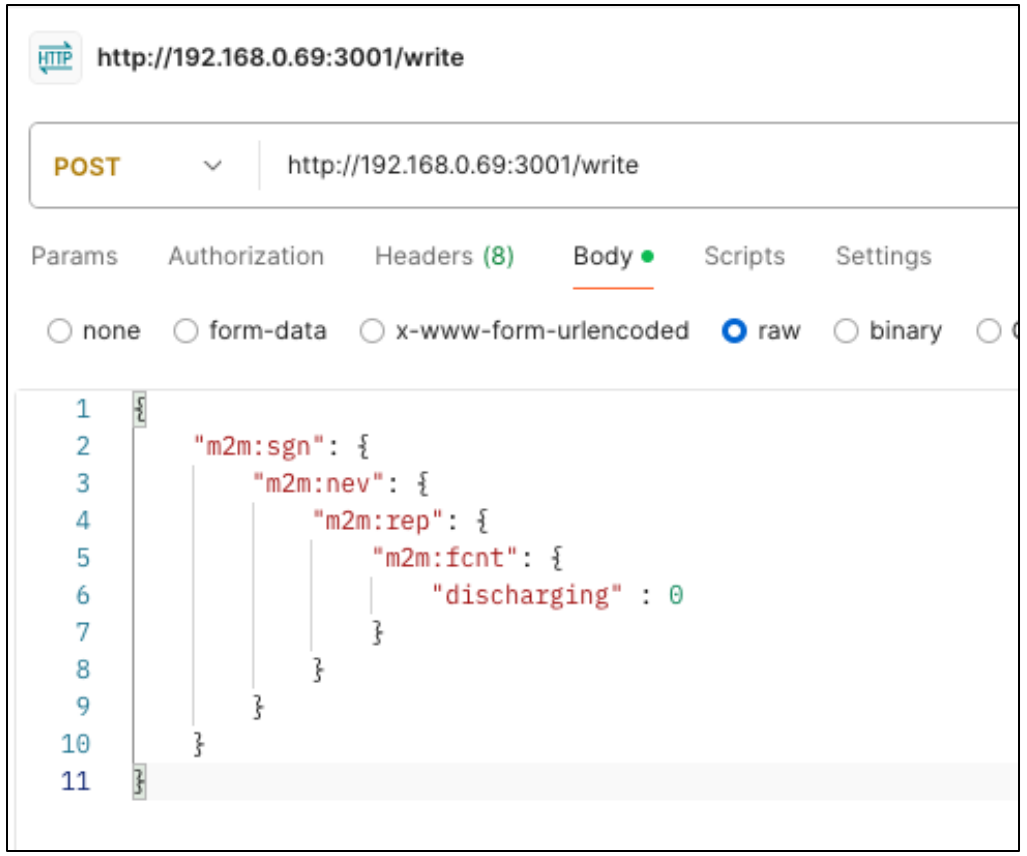
Resource Tree



Bulb on/off control



Bulb on command



Bulb off command

Todo

- Update Bulb on/off function
- Create AE and CNT resource automation