

tc_cloud - Thermostat Cloud Server

URL used: 18.116.46.202 port: 8001

Java HTTP server provides RESTful API to manage thermostat data (temperature, status, timestamp), backed by MariaDB-compatible database (thermostat_data)

This uses an AWS EC2 instance

FILES:

Server:

- tc_cloud.java - main Java source file
- tc_cloud.class - compiled class
- tc_cloud.service - systemd service file for autostart
- json-20230618.jar - JSON handling library
- mysql-connector-j-9.3.0.jar - JDBC driver for MySQL/MariaDB

Client:

- tc_main.c, tc_state.c, tc_error.c - C source files for daemon
- tc_client.c - client HTTP communication logic
- tcsimd - compiled daemon binary
- tcsimd.service - systemd service file for autostart
- tc_client.service - systemd service file for autostart
- client.service - systemd service file for autostart

TO RUN:

1. All .service files and source files begin in the same directory
2. Requires root access for systemd and MariaDB
3. MariaDB must already be installed and running.
4. Before running it: `chmod +x install_run.sh`
5. To run: `sudo ./install_run.sh`

To TEST:

POST:

```
curl -X POST -H "Content-Type: application/json" -d '{"temp":85.5, "status":"ON"}'
http://18.116.46.202:8001/thermostat
```

GET (all entries):

```
curl http://18.116.46.202:8001/thermostat
```

GET (with id):

```
curl http://18.116.46.202:8001/thermostat/id
```

PUT:

```
curl -X POST -H "Content-Type: application/json" -d '{"temp":45.3, "status":"OFF"}'
http://18.116.46.202:8001/thermostat/id
```

DELETE:

```
curl -X DELETE http://18.116.46.202:8001/thermostat/id
```