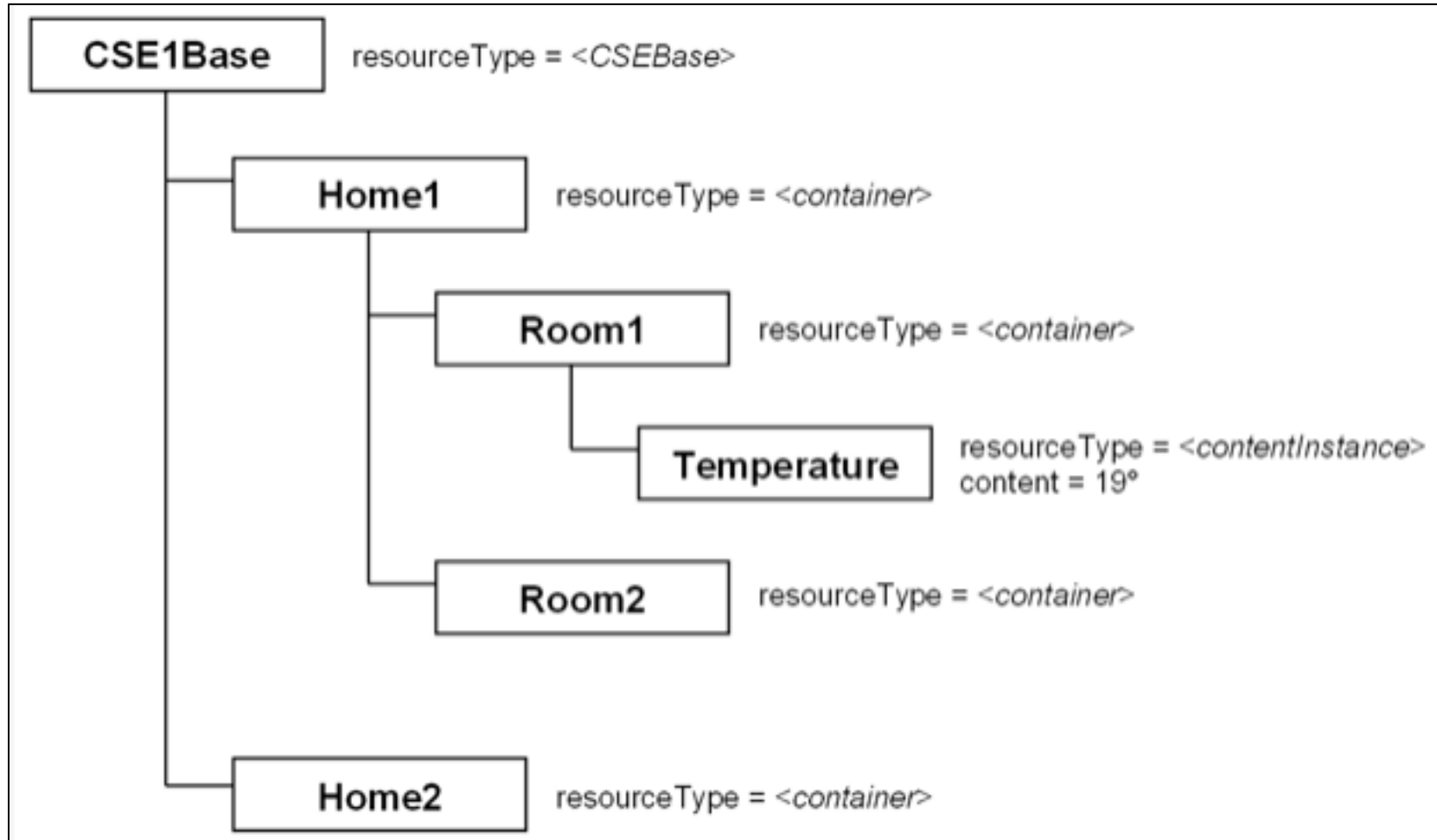


OM2M

Building an Interoperable IoT System

Resource Tree



To store data in OM2M we need

Using HTTP-Restful Client and Json format we need to create
Application Entity

- Container for each Device

 - Container for Describing what the Data Sends

 - A data Packet describing the device's data

- Container for Storing Data

 - The actual data

HTTP Response Codes

1. 200- OK
2. 201-Created
3. 400 Bad Request
4. 404-Not Found
5. 403-Forbidden
6. 500-Internal Server Error

404

Not Found

The resource requested could not be found on this server!

source: https://en.wikipedia.org/wiki/List_of_HTTP_status_codes

OM2M Home Page

- Open <http://127.0.0.1:8080/webpage> in browser.
- Type admin as username and password



username:

password:

OM2M CSE Resource Tree

<http://127.0.0.1:8080/-/in-cse>

– in-name




- acp_admin
- SDT_Home_Monitoring_Application_ACP
- ACP_Device_Admin_1636608866302
- SDT_Home_Monitoring_Application
- SDT_IPE



Using Postman



Good morning, vsuhas921!

Pick up where you left off, catch up with your team's work.

Recently visited workspaces

 **My Workspace** 

 **Team Workspace** 

Get started with Postman

Start with something new
Create a new request, collection, or API in a workspace
[Create New →](#)

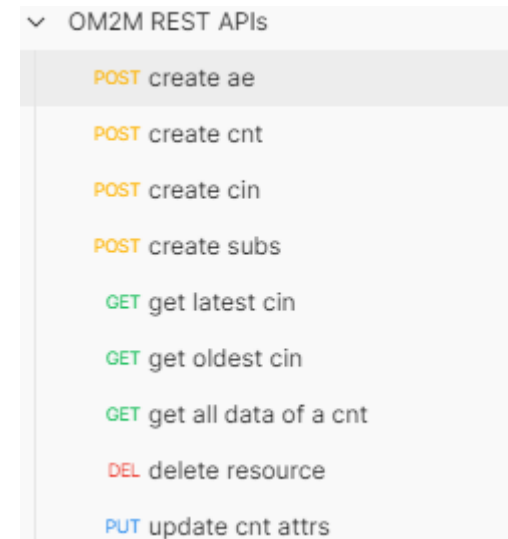
Import an existing file
Import any API schema file from your local drive or Github
[Import file →](#)

Explore our public network
Browse featured APIs, collections, and workspaces published by the Postman community.
[Explore →](#)

Work smarter with Postman
Learn how Postman can help you at every stage of the API development.
[Learn →](#)

After Importing

- Run Create AE, Create CNT, Create CIN, Observe the resource Tree after running each script



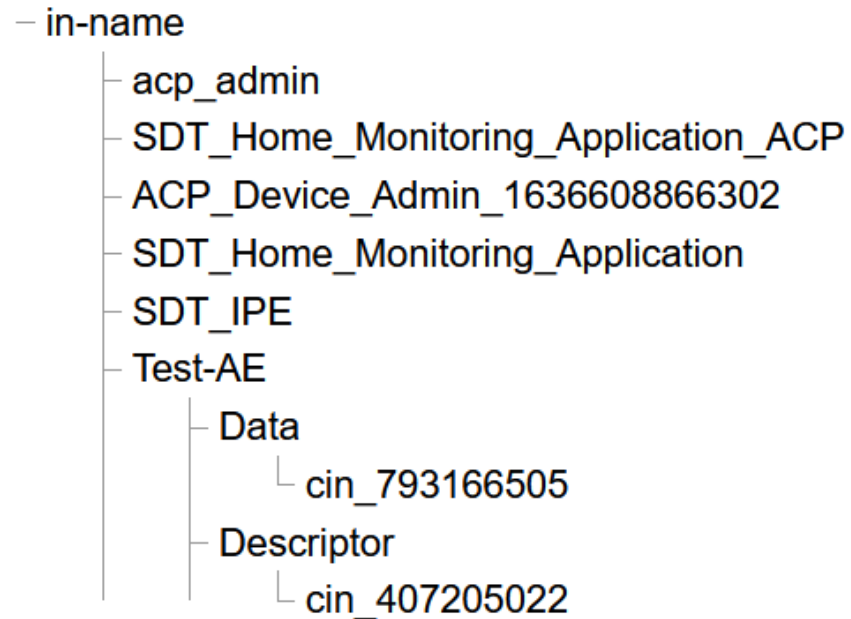
Did we achieve Interoperability?

1. (Platform Interoperability) Protocol: HTTP/HTTPS based data exchange
 2. (Syntactic Interoperability) Format: JSON data format
 3. (Device Interoperability) Device: PC/Laptop/ESP
 4. (Network Interoperability): Wi-Fi
- How do we address Semantic Interoperability?

Create Descriptor Container and its Instance

OM2M CSE Resource Tree

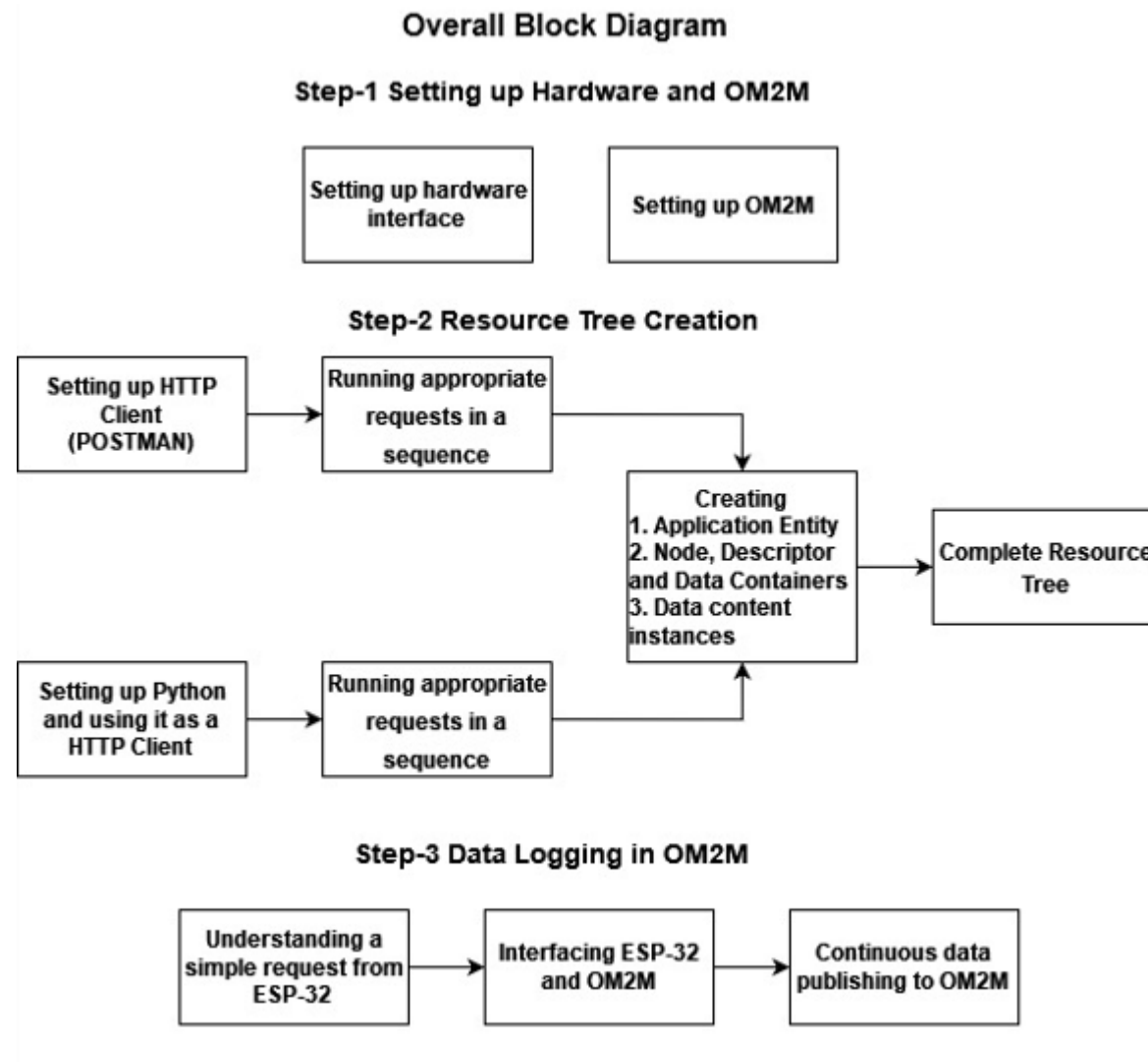
<http://127.0.0.1:8080/-/in-cse/cnt-704450874>



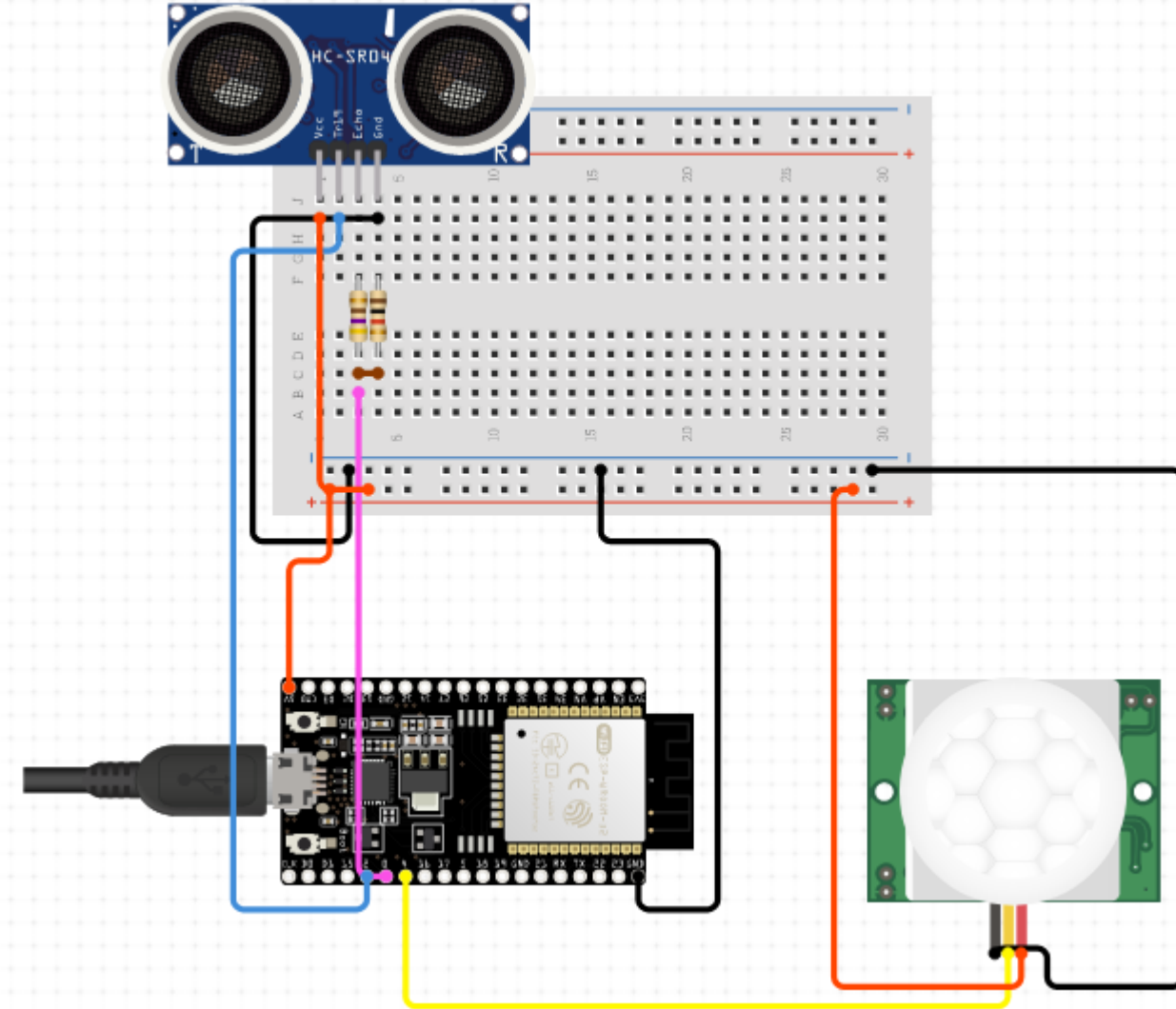
| Attribute | Value |
|-----------|---|
| rn | cin_407205022 |
| ty | 4 |
| ri | /in-cse/cin-407205022 |
| pi | /in-cse/cnt-704450874 |
| ct | 20211111T111348 |
| lt | 20211111T111348 |
| lbl | <ul style="list-style-type: none">• Label-1• Label-2 |
| st | 0 |
| cnf | text/plain:0 |
| cs | 22 |
| con | [Temperature, Humidity] |

Datalogging using ESP-32 and OM2M

Block Diagram



Circuit Diagram



| S.No | Pin Name | Pin no. |
|------|------------|---------|
| 1 | Trigger | 27 |
| 2 | Echo | 14 |
| 3 | PIR Output | 26 |
| 4 | VCC | |
| 5 | Gnd | |

Thank You