

## Project Purpose

- The primary purpose of this project is to create an OM2M Resource Tree.
- This is achieved by creating an Application Entity (AE) named test\_AE with a Container (CNT) named test\_container inside the AE.
- Also, a container instance inside the test\_container is created and the latest data inside the test\_container is fetched.

## Experiment

- The port is set as 1234 and OM2M version 1.3 is used for this experiment.
- The experiment is divided into four parts, namely:
  - Create an Application Entity (AE).
  - Create a Container (CNT).
  - Create a Container Instance with Data.
  - Fetch the latest data inside the Container (CNT).

## 1. Creating an Application Entity (AE)

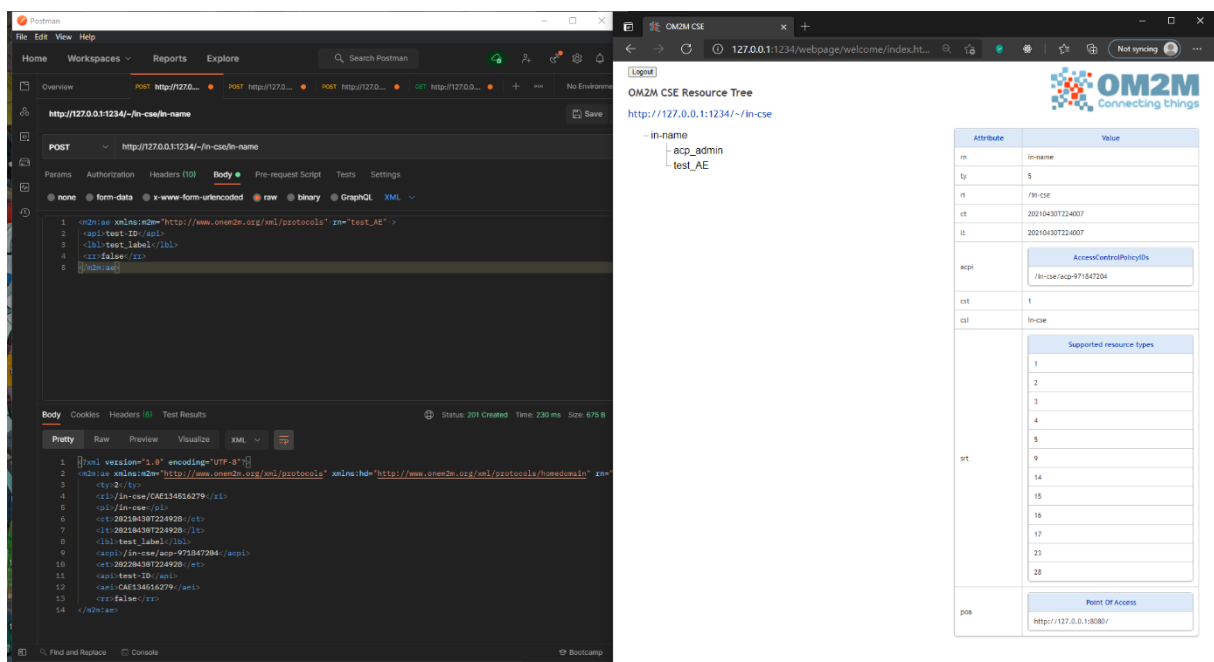


Figure 1 AE Creation: Code and Output

## 2. Creating a Container (CNT)

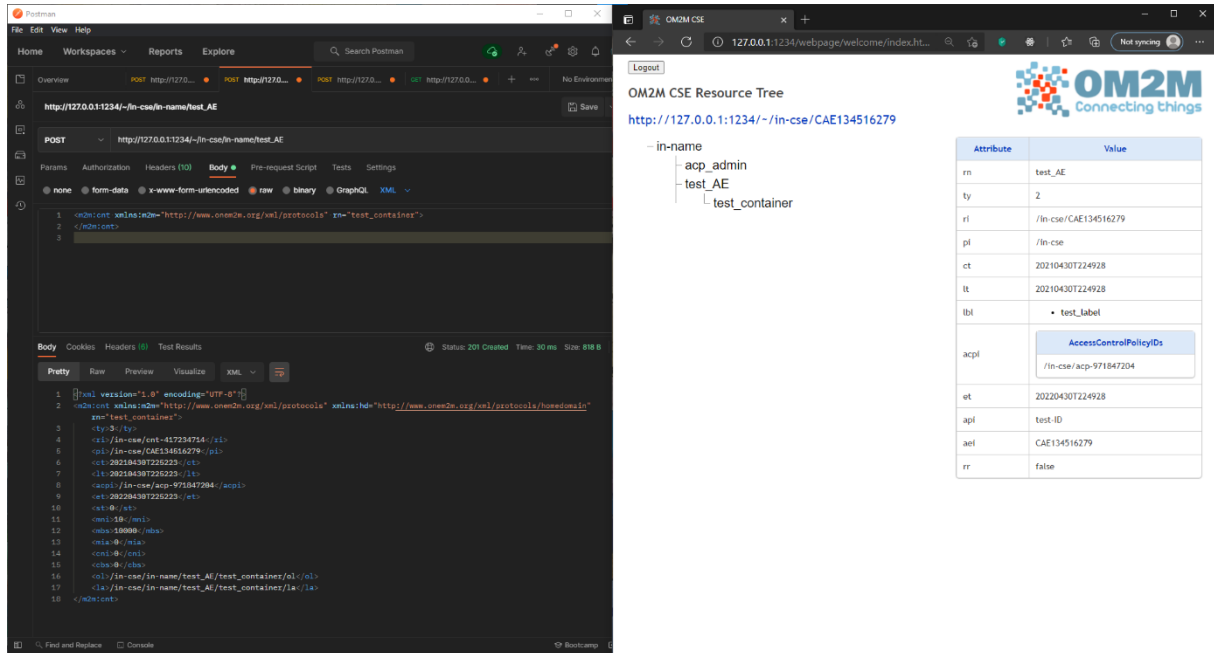


Figure 2 CNT Creation: Code and Output

## 3. Creating a Container Instance with Data.

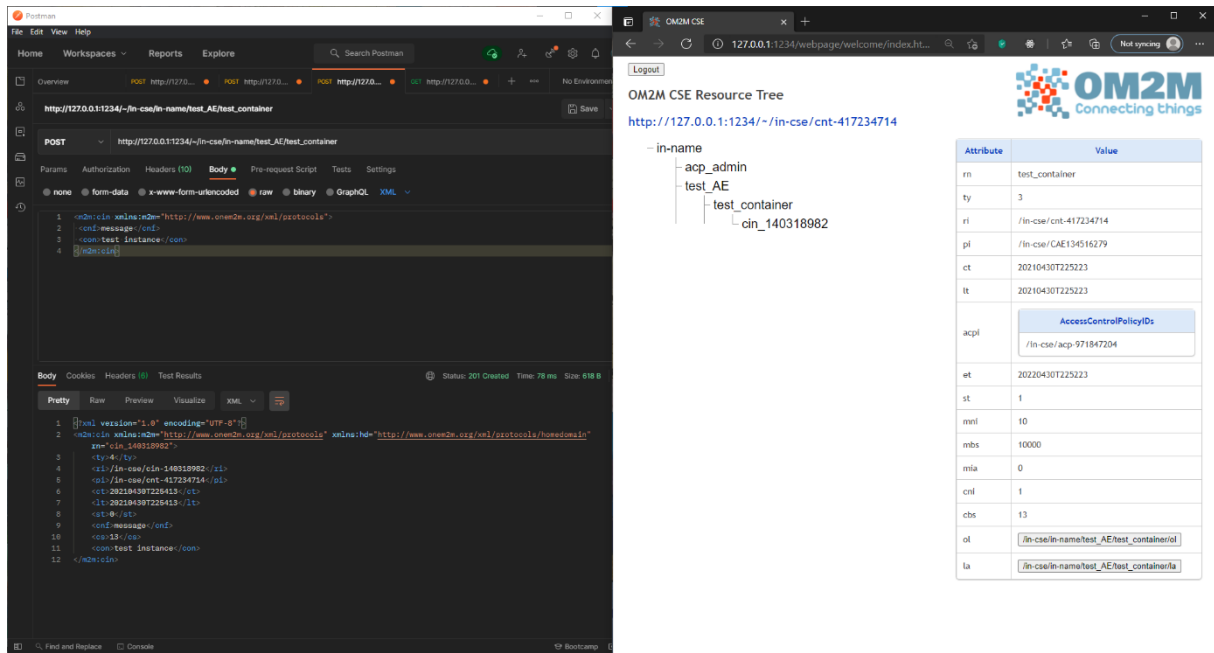
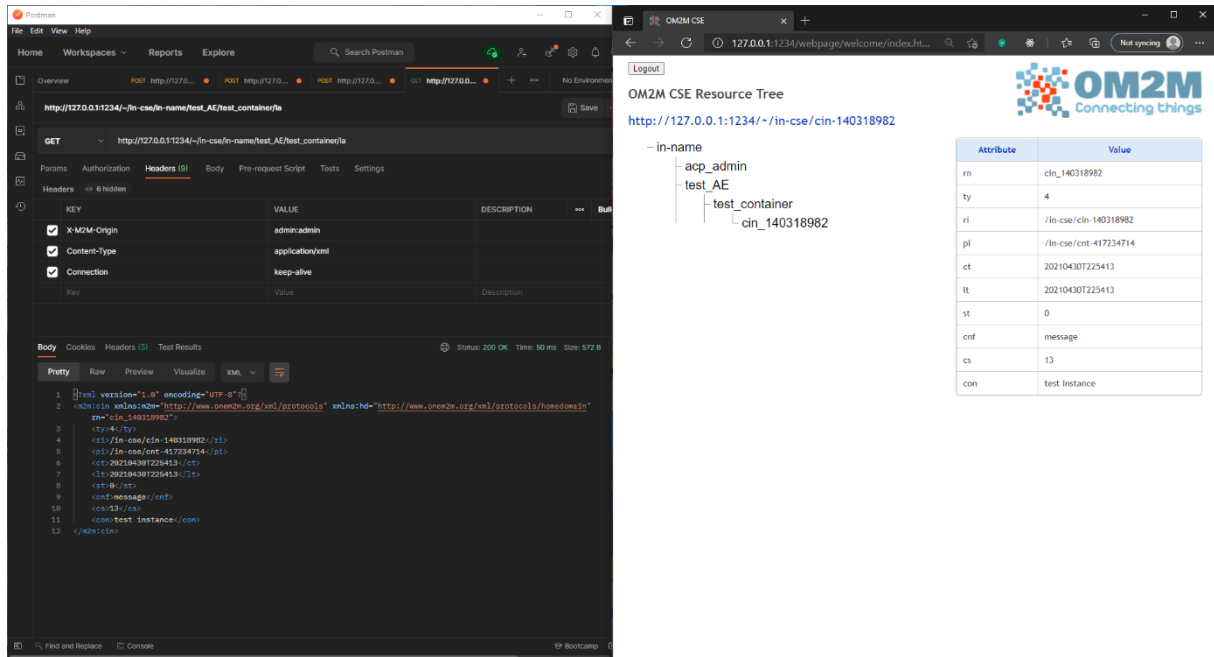


Figure 3 CNT Instance Creation: Code and Output

## 4. Fetching the Latest Data inside the Container



The screenshot displays two side-by-side windows. The left window is Postman, showing a GET request to `http://127.0.0.1:1234/~in-cse/in-name/test_AE/test_container/la`. The request headers include `X-OM2M-Origin: admin:admin`, `Content-Type: application/xml`, and `Connection: keep-alive`. The response body is an XML document with the following structure:

```

<?xml version="1.0" encoding="UTF-8"?>
<om2m:cin xmlns:om2m="http://www.om2m.org/xml/protocols" xmlns:hd="http://www.om2m.org/xml/protocols/homedomain"
  xm="cin_140318982">
  <ty>4</ty>
  <ri>/in-cse/cin-140318982/</ri>
  <pi>/in-cse/cnt-417234714/</pi>
  <ct>20210430T225413/</ct>
  <lt>20210430T225413/</lt>
  <st>0</st>
  <cnf:message/</cnf>
  <cs>13</cs>
  <con:test_instance/</con>
</om2m:cin>

```

The right window shows the OM2M CSE Resource Tree for the URL `http://127.0.0.1:1234/~in-cse/cin-140318982`. The tree structure is as follows:

```

-in-name
  -acp_admin
    -test_AE
      -test_container
        cin_140318982

```

Below the tree is a table with the following data:

Attribute	Value
rn	cin_140318982
ty	4
ri	/in-cse/cin-140318982
pi	/in-cse/cnt-417234714
ct	20210430T225413
lt	20210430T225413
st	0
cnf	message
cs	13
con	test_instance

Figure 4 Fetching Latest Data from CNT: Code and Output

**GitHub upload:** [GitHub - sriharshakns/IIITH-Research-Internship-2021-K-N-S-Sri-Harsha](https://github.com/sriharshakns/IIITH-Research-Internship-2021-K-N-S-Sri-Harsha)

This contains my Video Implementation, Documentation & Code for all goals.