Project Guide
(The smart building that using ultra sensor)

Team 428
(김문기, 김상빈, 전승훈, 나윤종)

Content

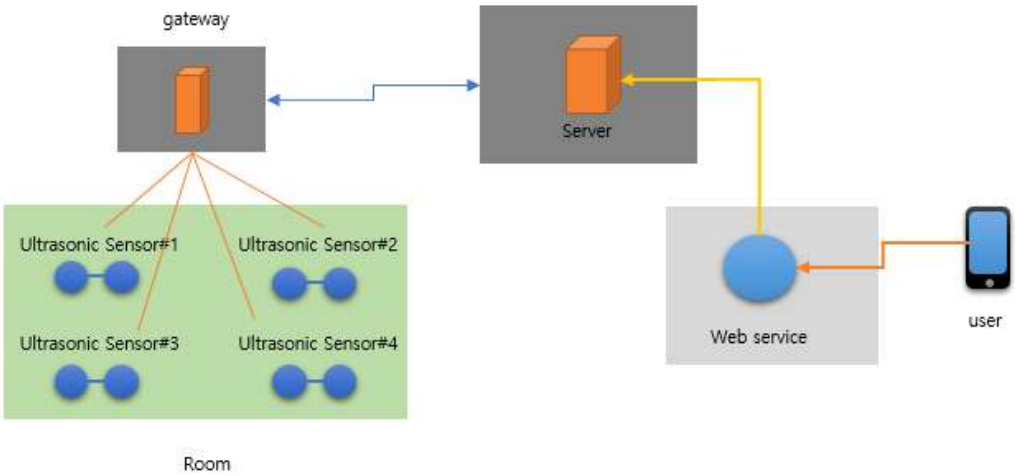
1. Introduction

This Report contains the information of the project that Team 428 discuss in Open source structure Subject . Our Project name is __Room Status__ Project. It use Ultrasonic Sensor to detect people in the room, and then visualizing congestion project. In this report, explain High Level's architecture and usecase, Resource Tree. And then, decribe and conclude what process is driven.

2. Main Subject

2.1. High level Architecture

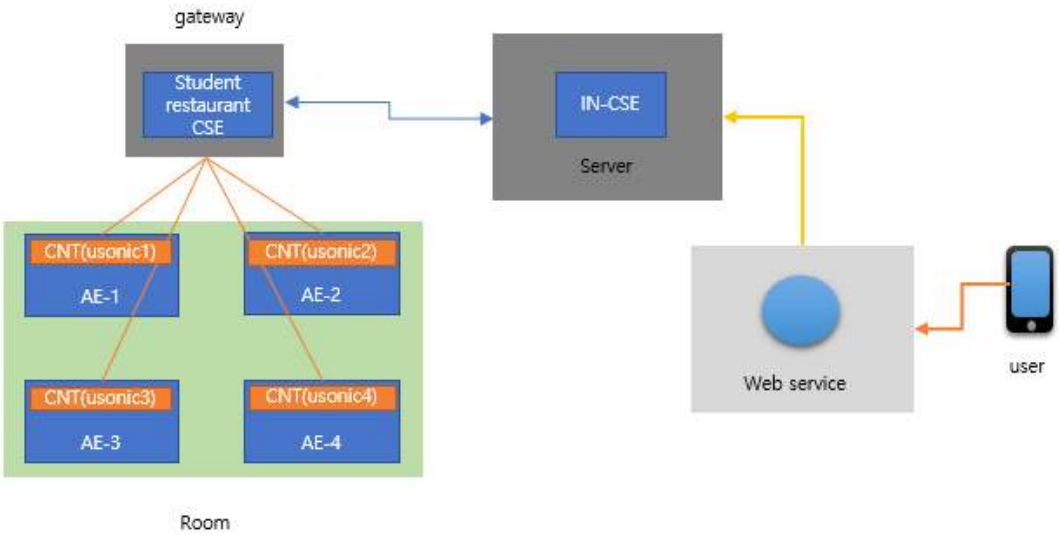
2.1.1. Overview Architecture



[Figure 2-1-1] Over view Architecture

Four Ultra Sonic Sensors are located in Room. They are moved by motor. Each sensors will measures 'the number of People' according to angle, and time.

2.1.2. Functional Architecture



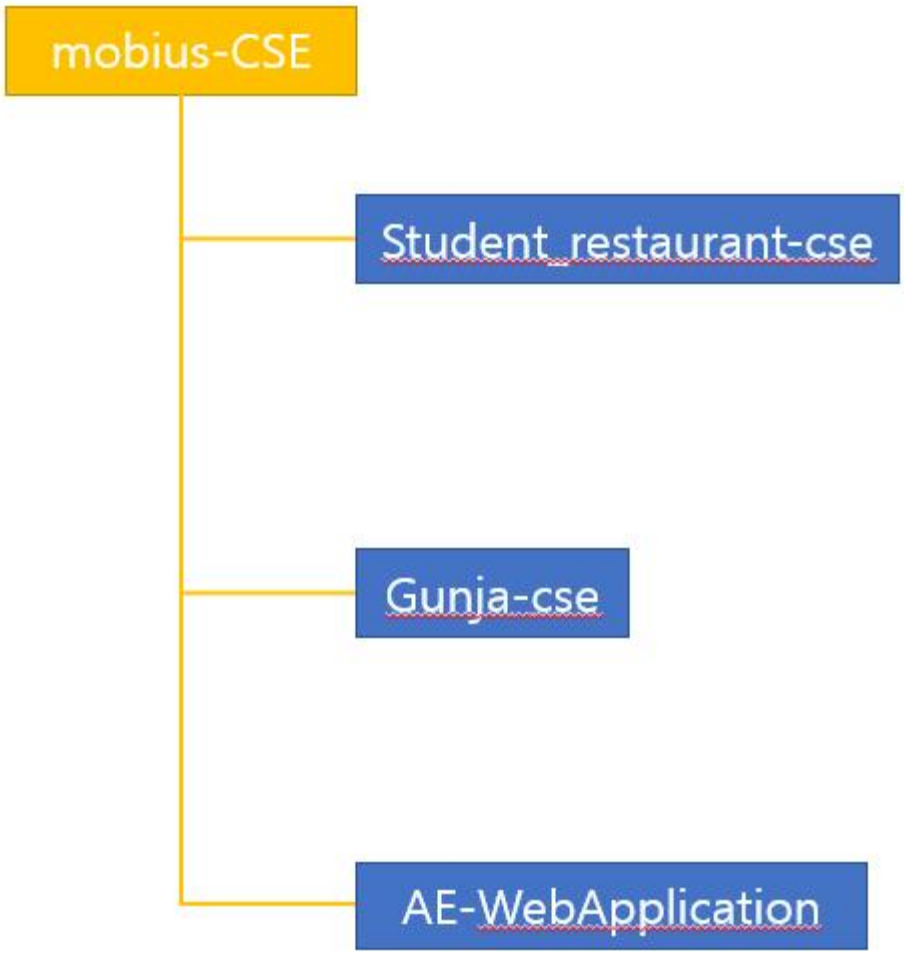
[Figure 2-1-2] Functional Architecture

A user can access to the Web service that can display server's data.

Between CNT and Web service, there is a 'CSE(Common Service Entity)' that play a roles in server.

2.2 Resource Tree

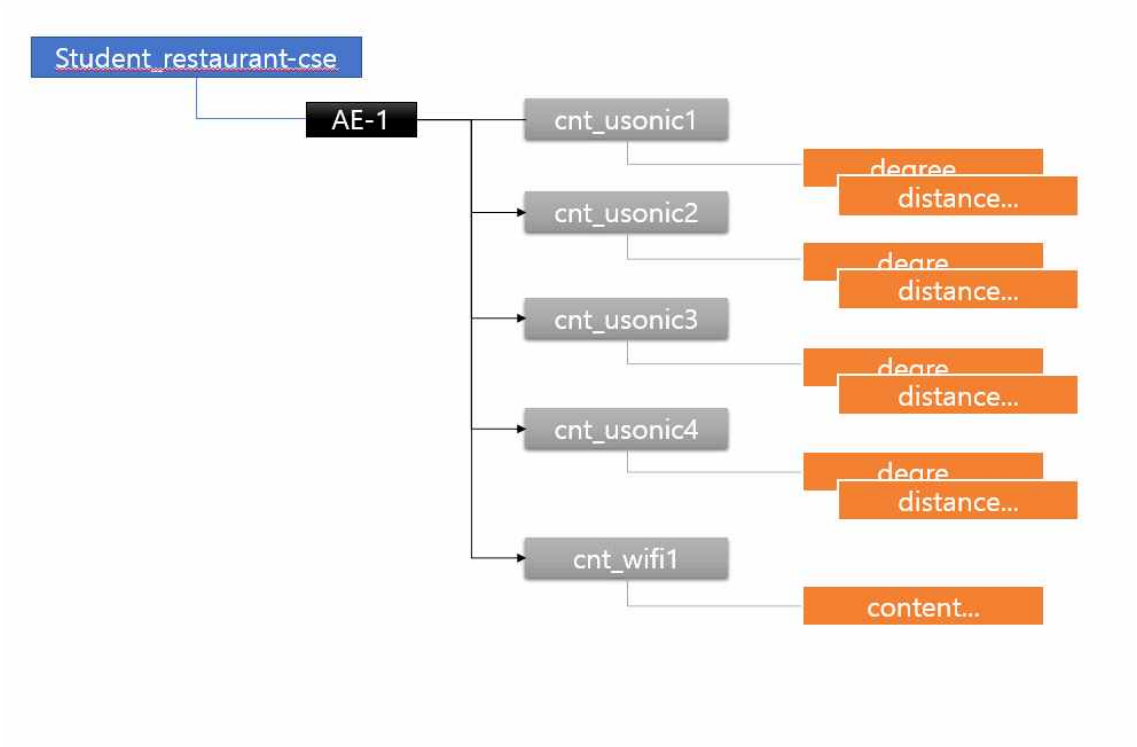
2.2.1 IN-CSE Resource Tree



[Figure 2-2-1] IN - CSE Resource Tree

A Mobius- CSE has three branch.
Student_restaurant-cse, Gunja-cse, AE-WebApplication is that.

2.2.2. MN-CSE Resource Tree

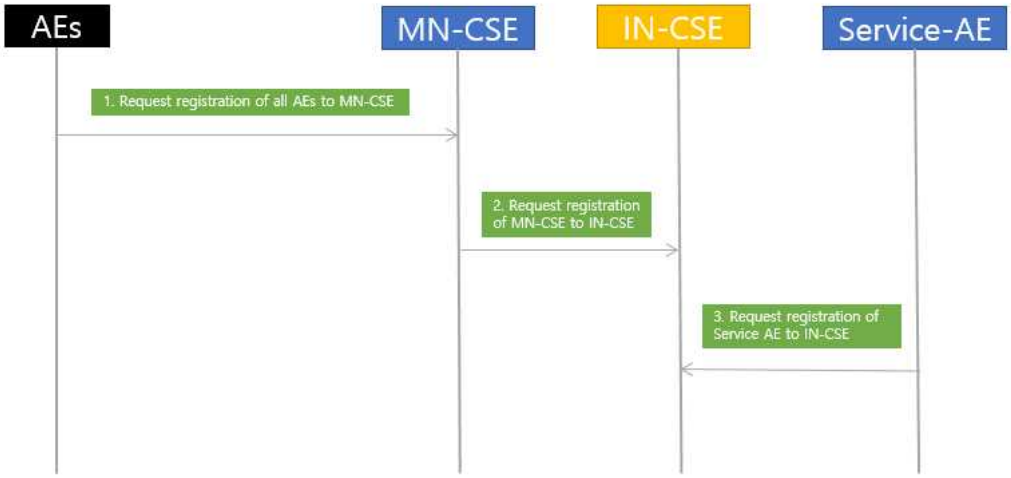


[Figure 2-2-2] MN - CSE Resource Tree

In Student_restaurant-cse, Only one AE-1 is existed.
Four ultra sonic sensors and cnt_wifi1 will access to Ae-1.

2.3. Procedure & entitiy

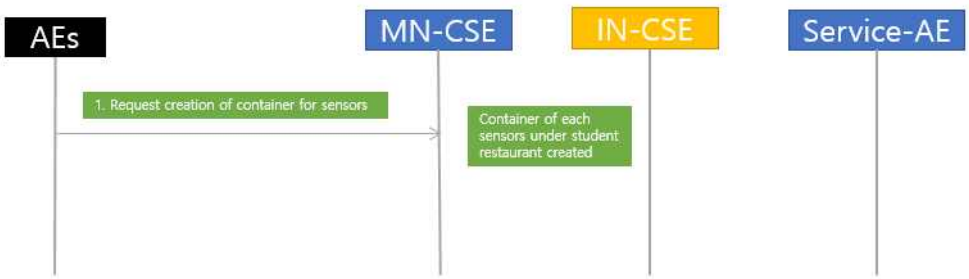
2.3.1. Entity registration



[Figure 2-3-1] Entity registration

Request registration of all AEs to MN-CSE. and goes to IN-CSE, and return to IN-CSE.

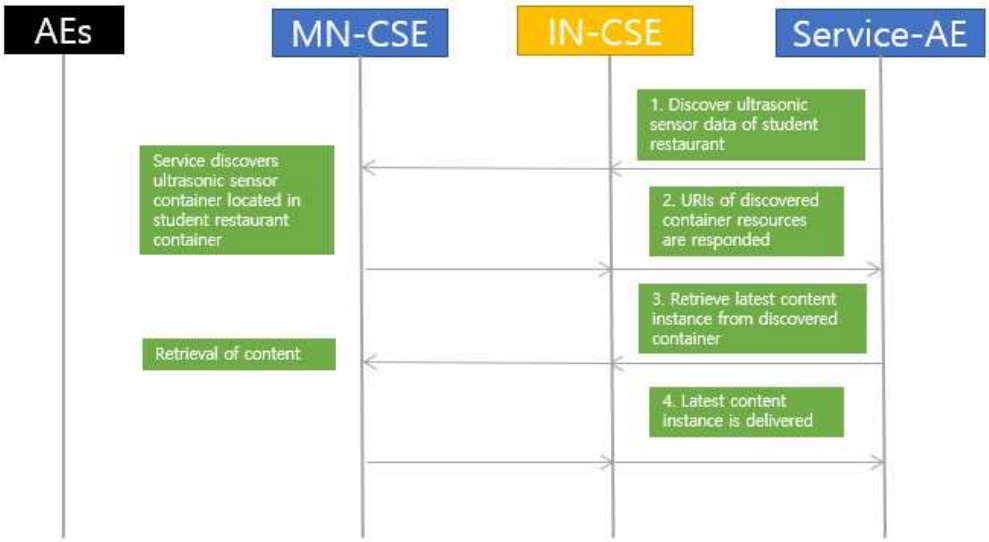
2.3.2. Resource Creation



[Figure 2-3-2] Resource Creation

Request Creation of Container for sensors goes to MN-CSE and Container of each sensors under student restaurant created

2.3.3. Discovery and retrieval



[Figure 2-3-3] Discovery and retrieval

Discover ultrasonic sensor data of student restaurant goes to IN-CSE, and goes to MN-CSE.

Service discovers ultrasonic sensor container located in student restaurant container.

And URIs of discovered container resources are responded.

latest content instance from discovered container.

3. E.T.C

3.1 Document history management

Date	Modifications	Author
2017.11.16	Initial Draft	M. G. Kim
2017.11.17	Update Draft	S. H. Jeon