(IoT Network) Practice -6-

CoAP Multicast

Index

I. Practice Overview

II. Revising GUI client
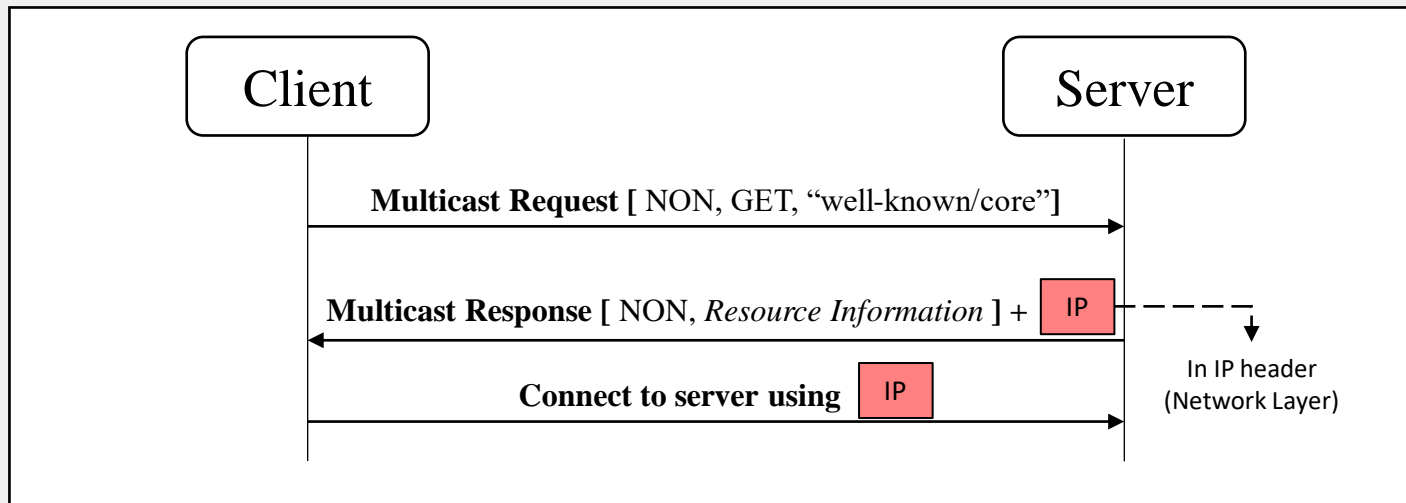
Practice Overview

- **실습목표**
  1. 실습 시나리오는 아래와 같음
     1. Client가 Server의 IP를 모른다고 가정한다.
     2. Client는 Multicast 통해 주변 서버에게 메시지 송신
     3. Client는 첫번째로 Multicast에 응답해준 서버와 연결

Multicast practice scenario

Revising GUI client

- ## CoAP_Server.java

```java
public static void main(String[] args){
    //프레임 열기
    GUI_client gui = new GUI_client(CoapConstants.COAP_ALL_NODES_IPV4_MC_ADDR, CoapConstants.COAP_DEFAULT_PORT);
}
```

```java
44    CoapClientChannel clientChannel = null;
45    CoapChannelManager channelManager = BasicCoapChannelManager.getInstance(); // Channel 관리자 전역변수로 선언
46
47
48
49    public GUI_client (String serverAddress, int serverPort) {
50        //제목 설정
51        super("IoT network GUI client");
52        //레이아웃 설정
53        this.setLayout(null);
54        String sAddress = serverAddress;
55        int sPort = serverPort;
56
57        try {
58            clientChannel = channelManager.connect(this, InetAddress.getByName(sAddress), sPort);
59
60            //Multicast 메세지 생성 & 전송
61            CoapRequest request = this.clientChannel.createRequest(CoapRequestCode.GET, "/.well-known/core", false);
62            request.setToken("MCToken".getBytes());
63            this.clientChannel.sendMessage(request);
64
65
66        } catch (UnknownHostException e) {
67            e.printStackTrace();
68            System.exit(-1);
69        }
70
```

Revising GUI client

- ## CoAP_Server.java

```java
174⊖    @Override
175    public void onResponse(CoapClientChannel channel, CoapResponse response) {
176        if (response.getPayload() != null) {
177            display_text.append(
178                "Response: " + response.toString() + " payload: " + Encoder.ByteToString(response.getPayload()));
179            display_text.setCaretPosition(display_text.getDocument().getLength());
180        } else {
181            display_text.append("Response: " + response.toString());
182            display_text.setCaretPosition(display_text.getDocument().getLength());
183        }
184        if (GUI_client.exitAfterResponse) {
185            display_text.append("===END===");
186            System.exit(0);
187        }
188        display_text.append(System.lineSeparator());
189        display_text.append("*");
190        display_text.append(System.lineSeparator());
191    }
192
193⊖    @Override
194    public void onMCResponse(CoapClientChannel channel, CoapResponse response, InetAddress srcAddress, int srcPort) {
195        // TODO Auto-generated method stub
196        if(response.getPayload() != null) {
197            display_text.append("<MCResponse from " + srcAddress.toString() + ":" + srcPort+ ">");
198            display_text.append(System.lineSeparator());
199            display_text.append(response.toString() + "("+ new String(response.getPayload()) +")");
200            display_text.setCaretPosition(display_text.getDocument().getLength());
201            display_text.append(System.lineSeparator());
202        }
203        else {
204            display_text.append("<MCResponse from [" + srcAddress.toString() + ":" + srcPort+ ">");
205            display_text.append(System.lineSeparator());
206            display_text.append(response.toString());
207            display_text.setCaretPosition(display_text.getDocument().getLength());
208            display_text.append(System.lineSeparator());
209        }
210        display_text.append("----------------------------");
211        display_text.append(System.lineSeparator());
212        //connecting to server
213        display_text.setCaretPosition(display_text.getDocument().getLength());
214        clientChannel = channelManager.connect(this, srcAddress, srcPort);
215        display_text.append("Connected to " + srcAddress);
216        display_text.append(System.lineSeparator());
217        display_text.setCaretPosition(display_text.getDocument().getLength());
218    }
219
```