

**2020 Cloud IoT Services**  
**Homework Assignment #1**

2020. 04. 13

**Homework Assignment**

1. **Task #1:** Create a **MQTT Message Broker**

- Create an **EC2 instance** (a virtual server) for the Message Broker
  - Assign an **elastic IP** (static IP)
  - Update additional configuration settings if required
- Create a **MQTT Message Broker** on the EC2 instance
  - Install the **Mosquitto MQTT broker** on an EC2 instance
  - Reconfigure the **security group** of the EC2 instance to open a network port for the MQTT protocol
  - Use the two commands (**mosquitto\_pub** & **mosquitto\_sub**) to test if the MQTT broker is working well

2. **Task#2:** Build **an application (in fact, two Node.JS programs) to copy a file** from one EC2 instance to another

- Create **two EC2 instances**: one for a file sender and another for a file receiver
- Develop **two Node.JS programs**: one for a file sender and another for a file receiver
  - Limit on the maximum size of a single MQTT message: 256MB

**Report Submission**

1. **Deadline:** 2020. 04. 27 (Monday)

2. **Report**

- Document
  - ① The **configuration** of the MQTT message broker: IP, topic names, etc. 조교가 별도의 프로그램으로 message broker가 작동되는 지를 확인할 수도 있음
  - ② The **steps** to have been taken to accomplish the tasks: 한 일들을 단계별로 구체적으로 설명
  - ③ The **screen snapshots**: Node.JS code 실행 화면을 캡처
- Node.JS code
  - ① Node.JS code (file sender & receiver): 실제 코드를 보고서에 포함