Classroom

G S L

Global
Shared
Learning

Global Classroom (ITA & TEC)

Tecnológico
de Monterrey

what is
GLOBAL
CLASSROOM?

Goal of Collaboration

- The collaboration focuses on developing the students the **sense of cooperation needed to solve a complex problem**.
- The problem to be answered is how to provide an **efficient and secure environment to send a distress message when a natural disaster occurs (earthquake, flood, etc.)**.

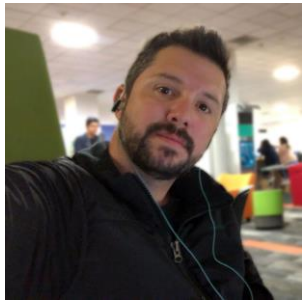
SDG's goals

The sustainable development goal is the "**Industry, Innovation, and Infrastructure**" and "**Sustainable Cities and Communities**," where the group will work to build a resilient infrastructure when there is a natural hazard.

Professors

Tecnológico de Monterrey

Alexandre Barreto



Luis José González

Luis Yépez Pérez

ITA

Cesar A. C. Marcondes

Scenario - Flood

No Telecommunications

No C2 Resources

Drones Operations

Raspberry Devices
OR
Android

Scenario - Flood

No Telecommunications

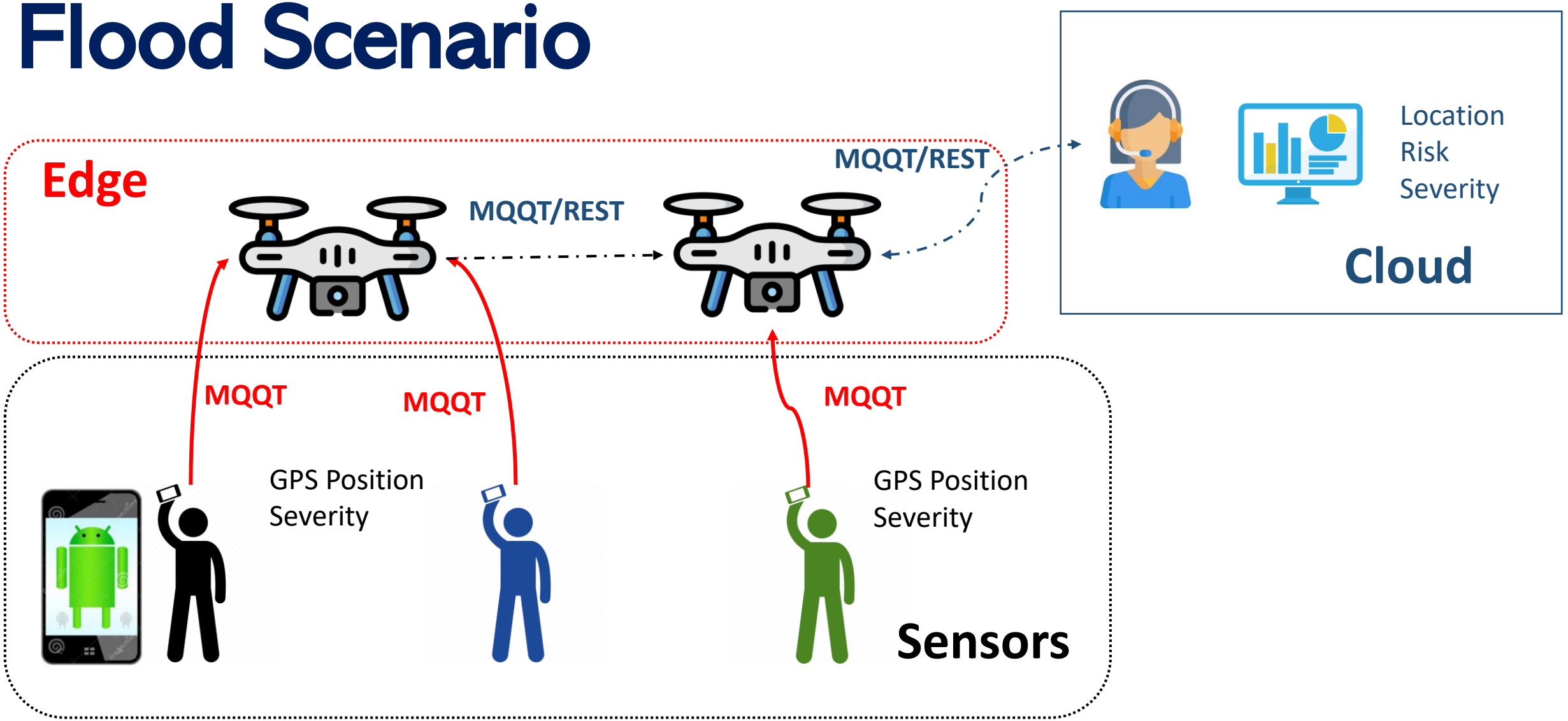
No C2 Resources

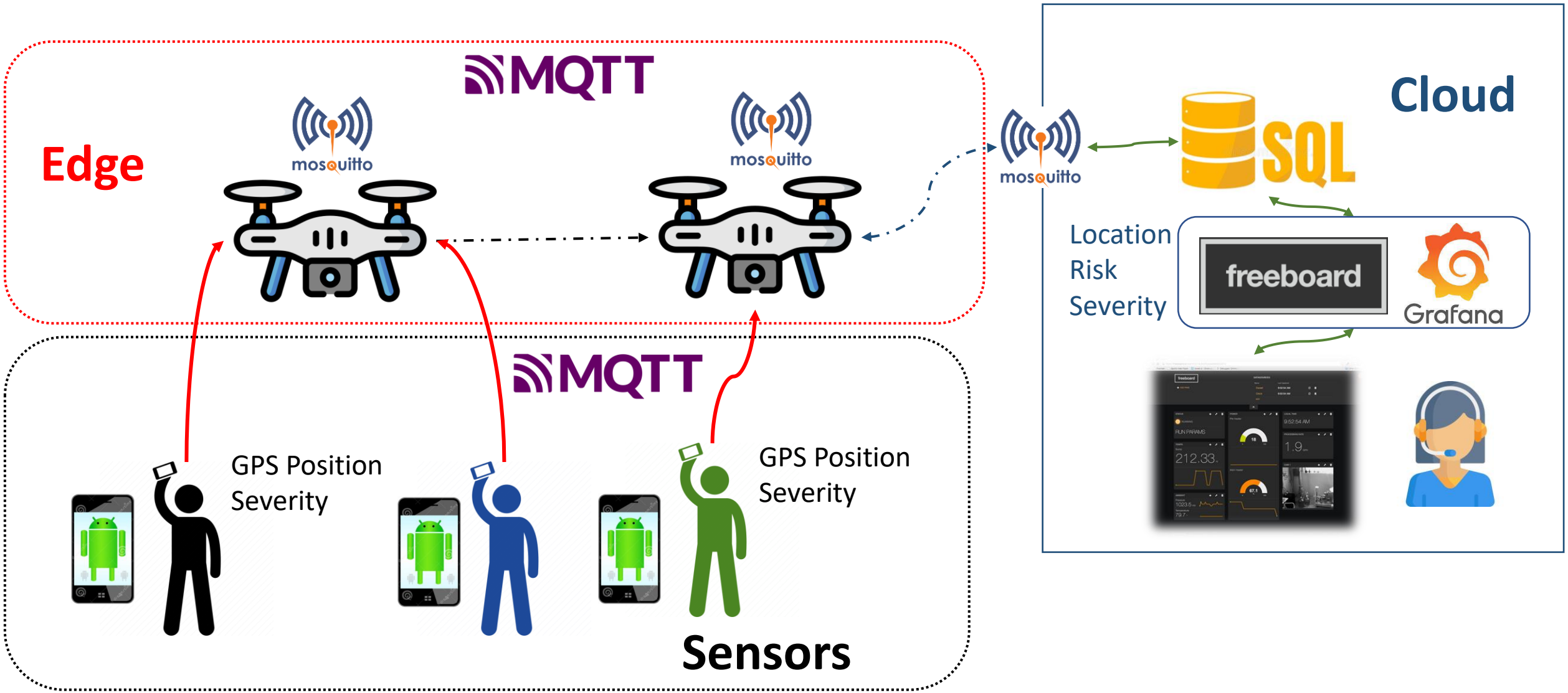
Drones Operations

Android

ENCHENTE - 2008
ITAJAÍ - SOBREVOO

Flood Scenario




Edge
MQTT
mosquitto
mosquitto
mosquitto
Cloud
SQL
Location
Risk
Severity
freeboard
Grafana
MQTT
GPS Position
Severity
GPS Position
Severity
Sensors

Legend

Emulated user node

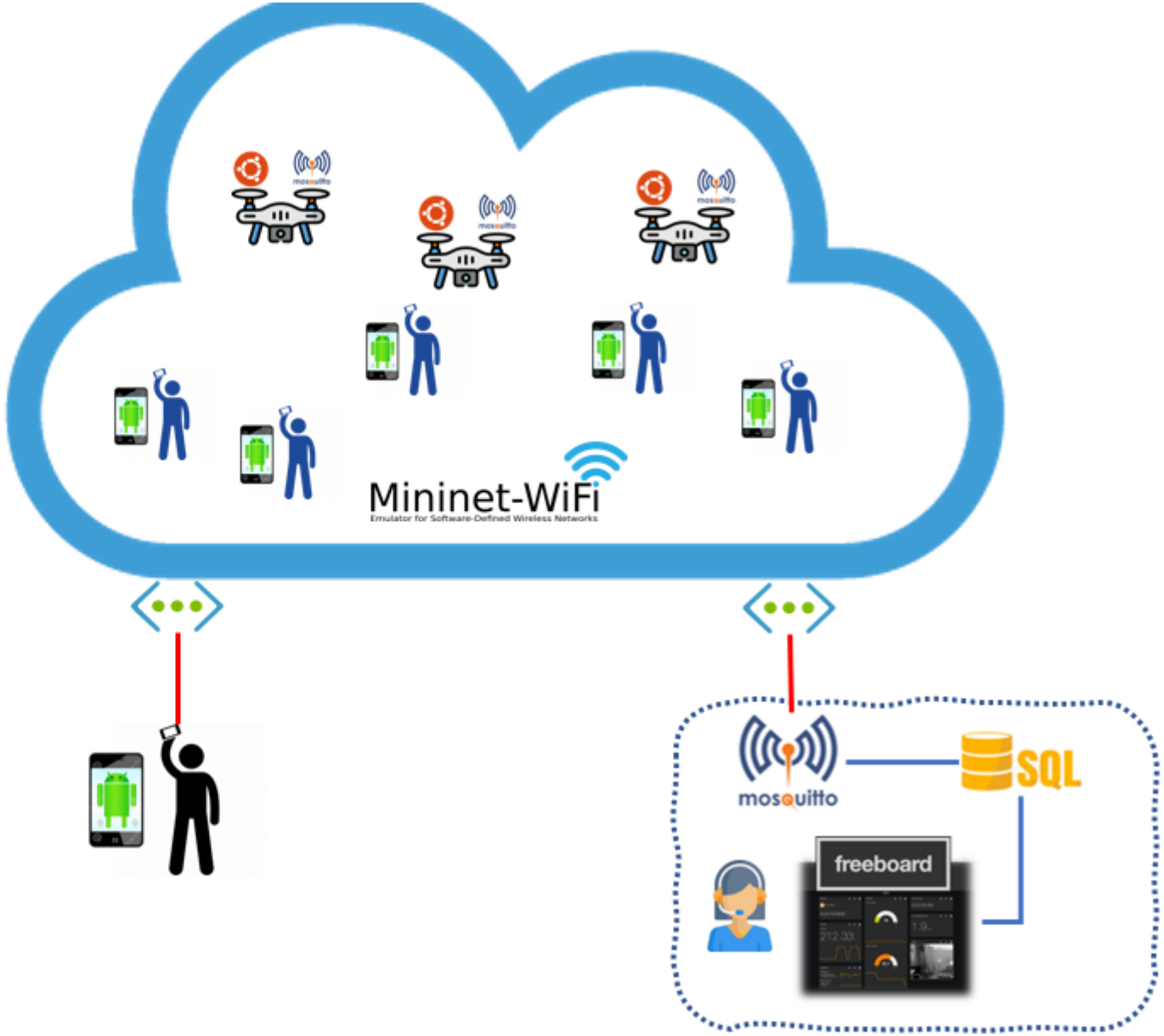
Real node (Android)

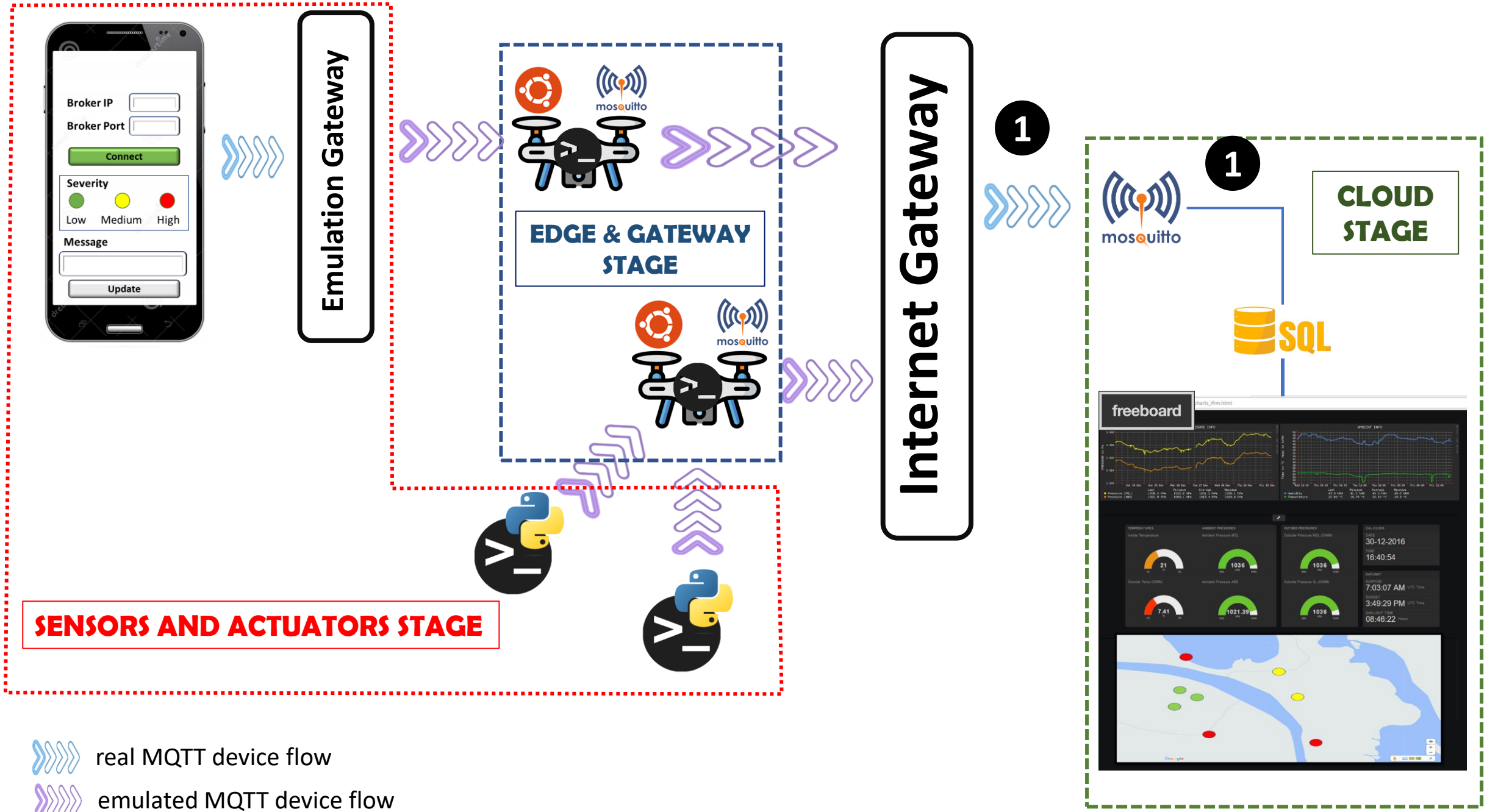
Real MQTT Broker – Bridge Mode

Emulated Interface (Mininet)

Emulated Wireless Environment(Mininet)

Real Application Server




Broker IP
Broker Port
Connect
Severity
Low
Medium
High
Message
Update
Emulation Gateway
mosquitto
EDGE & GATEWAY STAGE
mosquitto
SENSORS AND ACTUATORS STAGE
Internet Gateway
1
1
mosquitto
CLOUD STAGE
SQL
freeboard
30-12-2016
16:40:54
7:03:07 AM
3:49:29 PM
08:46:22
real MQTT device flow
emulated MQTT device flow

Trabajo colaborativo entre Profesor TEC y Profesor Internacional

Objetivo en común

Definir temática de interés

Acompañamiento durante la experiencia por parte de Coordinadores de Global Shared Learning Classroom

Icebreaker

1 semana

PASO 1
Intercambio de ideas
Discusión

Evidencia de participación

PASO 2
Construcción de acuerdos

Evidencia de participación

PASO 3
Presentación

Entregable

Actividad colaborativa multicultural

2 semanas

Reflexión

1 semana

Herramientas

Qué herramientas necesito. Por ejemplo: videoconferencia, tablero, presentación, mensajería instantánea, almacenamiento en la nube, etc.

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Agenda

- Week 1: Icebreaker Video & Reply to the peers
- Week 2: Project Setup
- Week 3: Client & Edge Stage
- Week 4: Cloud Stage
- Week 5: Final Presentation & Reflection

Final Presentation

- **What is the problem? (3 minutes):** In this part, the student needs to explain the situation the system plans to solve using external references (like news, papers, etc.). It is essential that the question related to the “why” needs to be answered. Try to motivate the audience to continue to watch your video.
- **Technical Architecture of Solution (8 minutes):** The student needs to explain the technical architecture. It is essential to identify the system’s border (what is inside and outside) and use formal language (like package, system UML diagram, or SysML).
- **How to configure the solution (1 minute):** It is essential to cite the issues about how to compile, configure, and run your solution. Remember, one of the items required to deliver is the README in the git. The idea is to explain the setup and some tips for compiling the code.
- **Demo of System (until 8 minutes):** This part is essential to demonstrate all the system's functionalities.

How do we evaluate the activities?

Step 1 – Icebreaker Video

Each student will make a video introducing yourself (1-3 minutes) where you tell us about yourself, who you are, where you are from, what you like to do in your free time, what are some of your interests or passions, and your plans. The idea is to focus more on what the international peers (you suppose) do not know about you, your city, your country, and your school.

Try to get the group's attention and remember that this is your opportunity to meet interesting people worldwide. Feel free to express yourself; this is a safe place we all respect.

After you generate the video, assign this space in Padlet; here, you will start a new post with your information as the title following this format: **Institution.FirstName.Lastname** (ex.: TEC.Alexandre.Barreto).

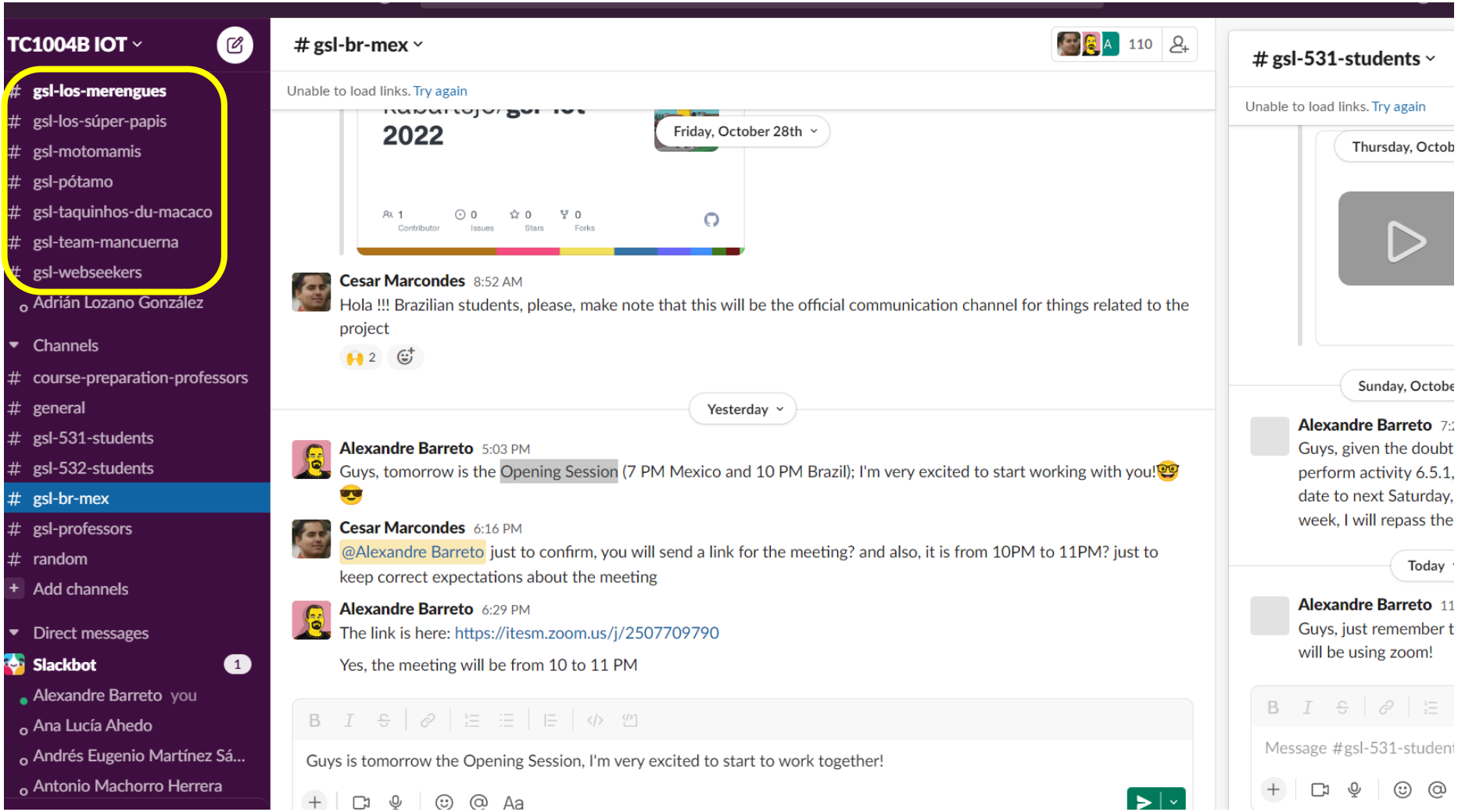
You can find the manual to create a post in the Padlet HERE.

Rubric

- **(100 points):** You make a post with your video of 1 to 3 minutes introducing yourself to your colleagues, talking about who you are, where you are from, what you like to do in your free time, what are some of your interests or passions, and your plans.
- **(80 points):** You make a post with your video of 1 to 3 minutes introducing yourself to your colleagues, but you missed to talk at least about one of these topics: who you are, where you are from, what you like to do in your free time, what are some of your interests or passions, and your plans.
- **(50 points):** You make a post with a brief video (less than 1 minute).
- **(0 points):** You did not share a video.

https://github.com/kabartsjc/gsl-iot-2022

slack



Tecnológico de Monterrey

Global Shared Learning

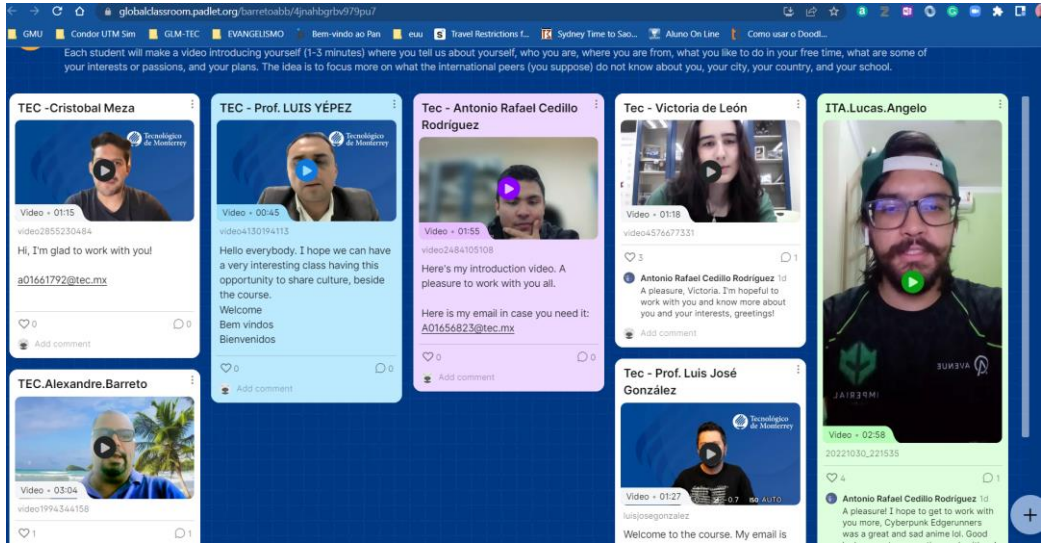
ITA

Digital Badge

- Participation in the icebreaker.
- Participation in Team Activities.
- Participation in the Reflection.
- Obtain 80% of the total of the Global Classroom grade.

Icebreaker Activity

- video introducing yourself (1-3 minutes)
- tell about yourself, who you are, where you are from, what you like to do in your free time, what are some of your interests or passions, and your plans.
- The idea is to focus more on what the international peers (you suppose) do not know about you, your city, your country, and your school.
- **reply to at least two other students (from the other country)**



https://globalclassroom.padlet.org/barretoabb/4jnahbgrbv979pu7

Next steps

- Read the GitHub website
- Talk if your peers
- Perform the icebreaker activity
- Answer the survey

https://calendly.com/d/g6f-7r8-nzq/what-day-would-you-like-to-have-advice

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