

Disaster Flow Description

The Disaster Flow app is designed to efficiently handle reported disasters through a systematic process. Here's a breakdown of the workflow:

1. Alert Reporting by Citizens:

- Registered citizens can report alerts through the app.
- Fields to be filled include:
 - **Type**: Represents the type of disaster.
 - **Location**: Specifies the location of the disaster.
 - **Impact**: Describes the impact of the disaster.
 - **Urgency**: Indicates the urgency of the situation.
 - **Image** (optional): Users can attach images related to the disaster.

2. Alert Severity Determination:

- The app calculates the severity of the alert based on the reported **Urgency** and **Impact**.
- The severity information is used to create an alert with essential details: **Location**, **Image** (optional), and **Type**.

3. Alert Transmission via RabbitMQ:

- An event is sent to **RabbitMQ** using the **alerts** topic and a routing key of **alerts.***.
- The event is consumed by the **Emergency Response Service** consumer.

4. Emergency Response Handling:

- The **Emergency Response Service** processes the received alert event and creates an alert with the provided information.
- Based on the **Type** and **Location** of the alert, the service identifies all available emergency response teams within a 10Km radius.
- Notifications are sent to users within a 500m radius of the reported alert, urging them to take immediate action if they can assist. For example, if the alert type is **Fire**, nearby individuals are notified to help before professional firefighting teams arrive.

5. Response by Emergency Teams:

- Upon receiving the alert, an emergency response team assesses the situation.
- If available, the team responds to the user who reported the alert and takes necessary actions to handle the disaster.