

# Message Queue based Communication amongst MicroServices

## Use-Case: Opening a gate

2 Microserices:

One for the gate

One for the controller that opens the gate

Through a *MessageQueue* the Controller sends a command to the gate to open.  
Then the gate sends a confirmation back to the controller that it did indeed open.

# Microservices with StdLib

## //Install StdLib

```
$ npm install lib.cli -g
```

## //Initialise a new Workspace

```
$ mkdir stdlib-workspace  
$ cd stdlib-workspace  
$ lib init
```

## //Create a new Service

```
$ lib create <service>
```

## //Run Service

```
$ lib .
```

### FOLDERS

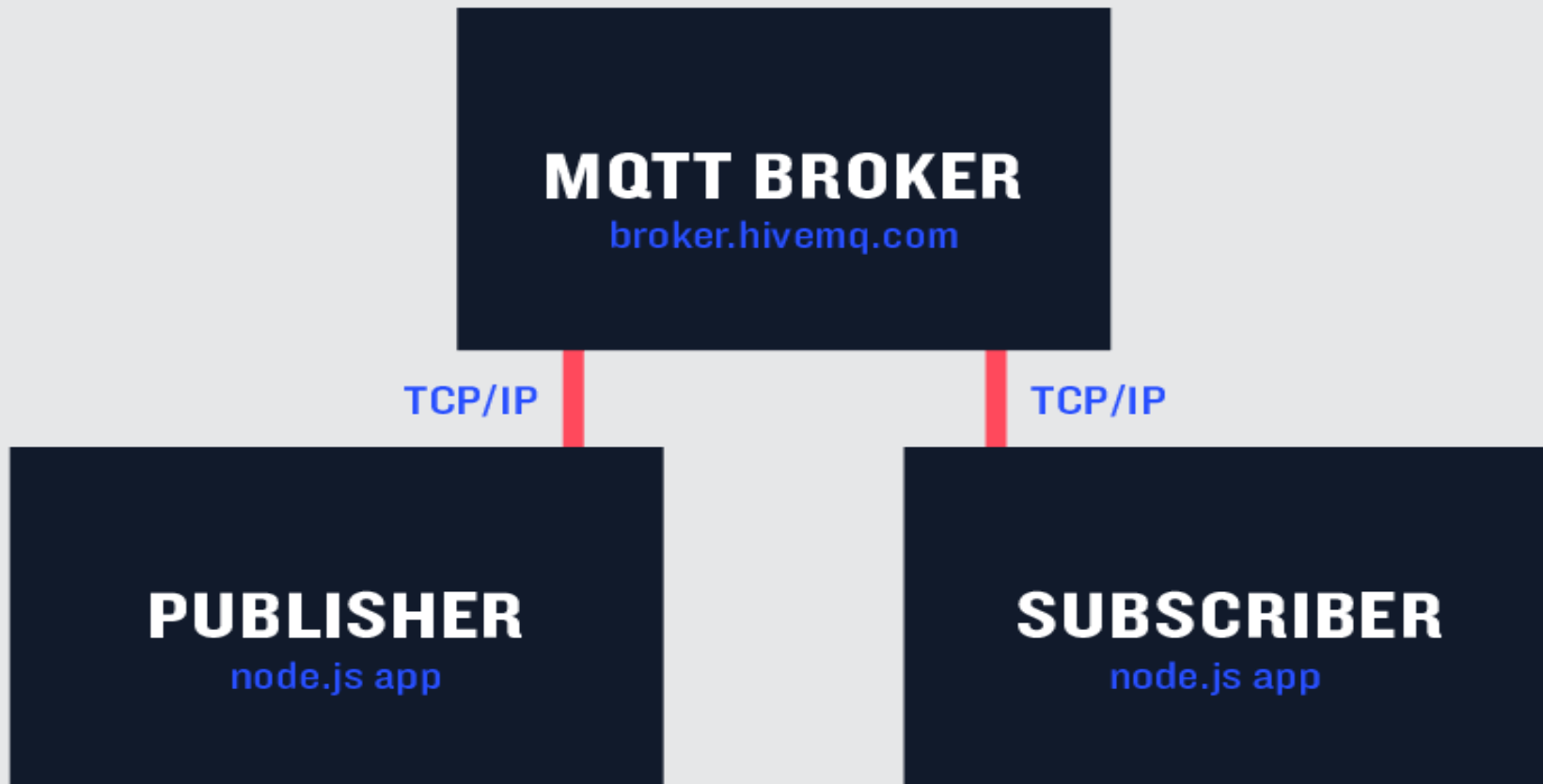
- ▼ microservice1
  - ▼ Levi
    - ▼ microserviceOne
      - ▼ functions
        - \_main\_.js**
      - node\_modules
      - .gitignore
      - env.json
      - package-lock.json
      - package.json
    - microserviceTwo
    - .stdlib

```
__main__.js  .gitignore  
1  /**  
2  * A basic Hello World function  
3  * @param {string} name Who you're saying hello to  
4  * @returns {string}  
5  */  
6  module.exports = (name = 'world', context, callback) => {  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16 }
```

//Insert Code here

# Message Queue

## MQTT COMMUNICATION DIAGRAM



## Publisher

```
client.on('connect', function () {  
  client.publish('CommandToGate', 'OpenGate')  
})
```

## Subscriber

```
client.on('connect', function () {  
  client.subscribe('CommandToGate');  
  client.on('message', function (topic, message) {  
    if(topic == 'CommandToGate'){  
      console.log(message);  
    }  
  })  
})
```



# CloudMQTT

Hosted broker for the Internet of Things

```
var mqtt = require('mqtt');
var options = {
  port: 15139,
  host: 'mqtt://m21.cloudmqtt.com',
  clientId: 'mqttjs_' + Math.random().toString(16).substr(2, 8),
  username: 'wvyntdpz',
  password: 'bFWNurIN-Slw',
  keepalive: 60,
  reconnectPeriod: 1000,
  protocolId: 'MQIsdp',
  protocolVersion: 3,
  clean: true,
  encoding: 'utf8'
};
var client = mqtt.connect('mqtt://m21.cloudmqtt.com', options);
```

Thanks for the attention

Fekete Szilárd Norbert & Maier Levente