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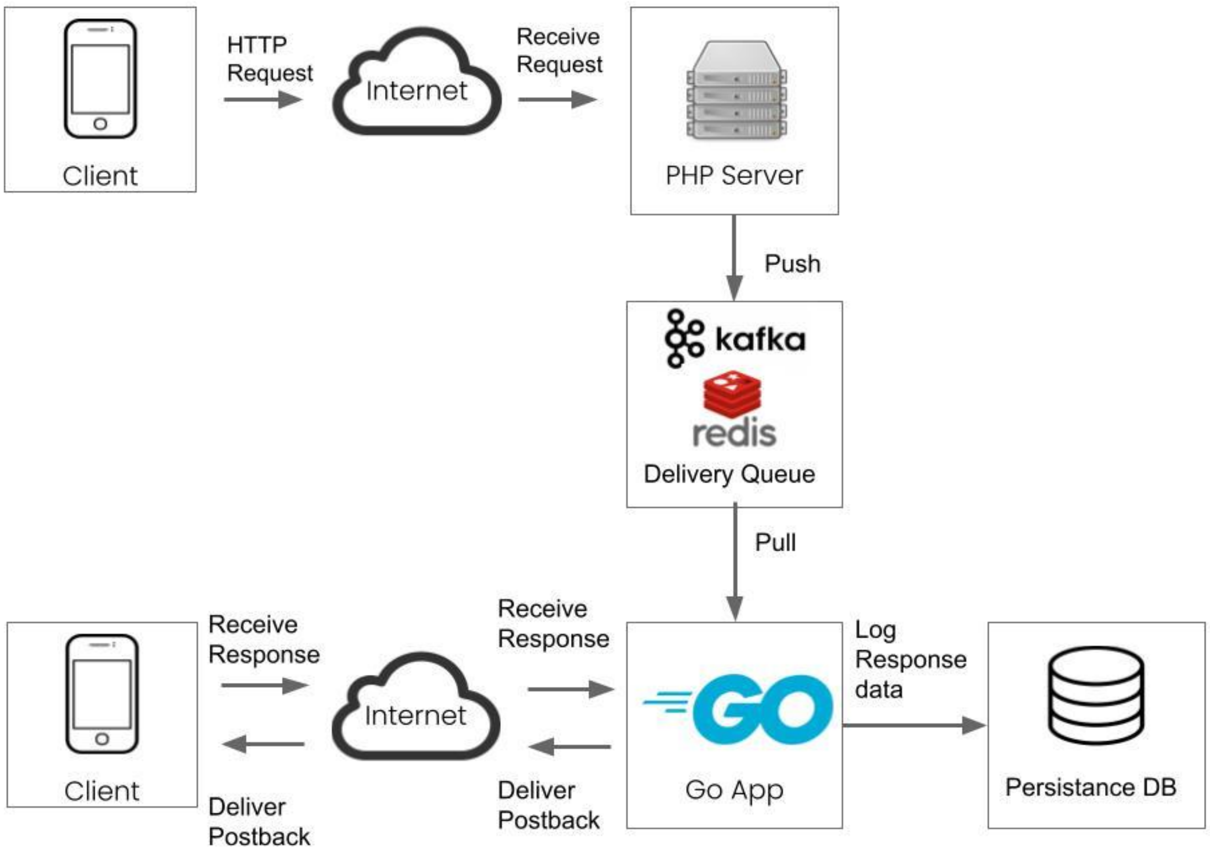
Kochava’s Miniproject documentation

General architecture

There are three main parts:
- PHP server
- Delivery Queue
- Go App

The process starts with a remote client. This client sends a REST HTTP request to the PHP Server. The server pushes a postback object on a Delivery Queue (Apache) for each data object on the request. In parallel, there is a Golang App that pools the Queue to pull postback objects. For each pull, it delivers the postback object to the given HTTP endpoint.



Then the response is stored in a persistent database (log text file).

Both the Delivery Queue and Go App can be monitored to troubleshoot the system.

PHP documentation

Instructions

- The main php service is "ingest.php" file.
- To change apache kafka's ip modify the constant BROKER_ADDRESS

Configuration

- PHP version: 7.4
- XAMPP 3.3.0 to manage the server

Install dependencies

- composer require nmred/kafka-php

Apache Kafka server (Windows 10)

Instructions

- To start the service execute the following commands in the same order:
  .\zookeeper-server-start.bat ..\..\config\zookeeper.properties
  .\kafka-server-start.bat ..\..\config\server.properties

Configuration:

- Apache Kafka: 3.2.0 (install release from apache kafka web page to use)

GO documentation

Instructions

- The main go service is "main.go" file.
- To change configurations such as logs or apache kafka change the constants values
- Logs can be found on "logs_file"

Configuration:

- Golang version: 1.18

Install dependencies

- include "github.com/segmentio/kafka-go" // external

Testing

To test the system, Postman is used.

A POST is performed to localhost/kochava/php/ingest.php (note localhost is the php server ip) with the following body:

```
{
    "endpoint":{
        "method":"GET",
        "url":"https://api.agify.io/?name={name}"
    },
    "data":[
        {
        "name":"Mohamed"
        }
    ]
}
```

To test the case where a parameter is not matched, it can be easily done with changing “name” to “potato” (on “data” array)