Network Diagram

Team No Stress
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Daniel Ramirez (Team Leader)
Hunter Lewis
Luke Sunaoka
Matthew Quinn
Michelle Vo
Tyler Thorin

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1 Network Diagram Overview

1.1 Purpose

The network diagram provides an overview of the network for our project, What the Food?, and breaks down the overall network flow.

1.2 IIS and MariaDB

We will be hosting the website through IIS and storing data on MariaDB. Both of these will be running from the same machine, IP: 24.205.32.98 (this is our team leader's machine).

1.3 Main Web App

The main web app is the point of connection between the users and our network, it will be the main web page that communicates with both the client machine and the microservices in our project. The main web app will be running on its own separate from the microservices, but will communicate with all of them through sockets to provide various functions.

1.4 Microservices

1.4.1 Overview

Our web app leverages microservices in order to avoid a monolithic architecture. This allows our app the ability to scale with ease since our different services will be decoupled from one another. This microservice based structure will also allow our main web app to function if there were ever an issue with one of our other services.

1.4.2 Scan/Search

This microservice will handle the scanning and searching of a product image/code that will be given by a user.

1.4.3 Account/Login

This microservice will handle login and account creation requests and will be the main point of contact for user data additions and changes.

1.4.4 User Uploads

This microservice will handle the process of user uploads. Anything that the user will need to provide our server to be saved for long term storage or processing.

1.4.5 History

This microservice will handle our services History feature. This service will access both the client information and food information server.

1.4.6 Food Information

This microservice will handle the display and aggregation of information of the food products. This service will access the food information server.

1.4.6 News

This microservice will handle personalized and non personalized news. Searching for news and pushing news to users.

1.5 Database

1.5.1 Database

This will be the sole database for the server, it will hold all requisite data for our servers needs.

1.6 Connection/Ports

1.6.1 HTTPS

HTTPS (Port: 443) will be the connection between our main web app and our clients, this is because this allows a fast and secure connection and it is also the main way that Google Firebase sends and receives information.

1.6.2 Other Ports

For our processes to communicate with one another we will be using ports 49200 to 49211 to communicate through sockets. These ports will be reserved on the host machine to prevent any interference.

1.6.3 MariaDB

Since we are using MariaDB as our database manager, the default connection port is 3306.

1.6.4 Firewalls

The main firewall for our network will be between our client and our main web app. This firewall will filter geographically, stopping any IP address outside of the US from accessing our website. Our database will have firewall rules that determine how our data can be accessed.

1.6.4.1 MariaDB Firewall Rules

- Only connections that can be made with our database must not only provide the proper username but password as well.
- Only whitelisted IP can access our data (whitelisted IP's being the group member's IPs.