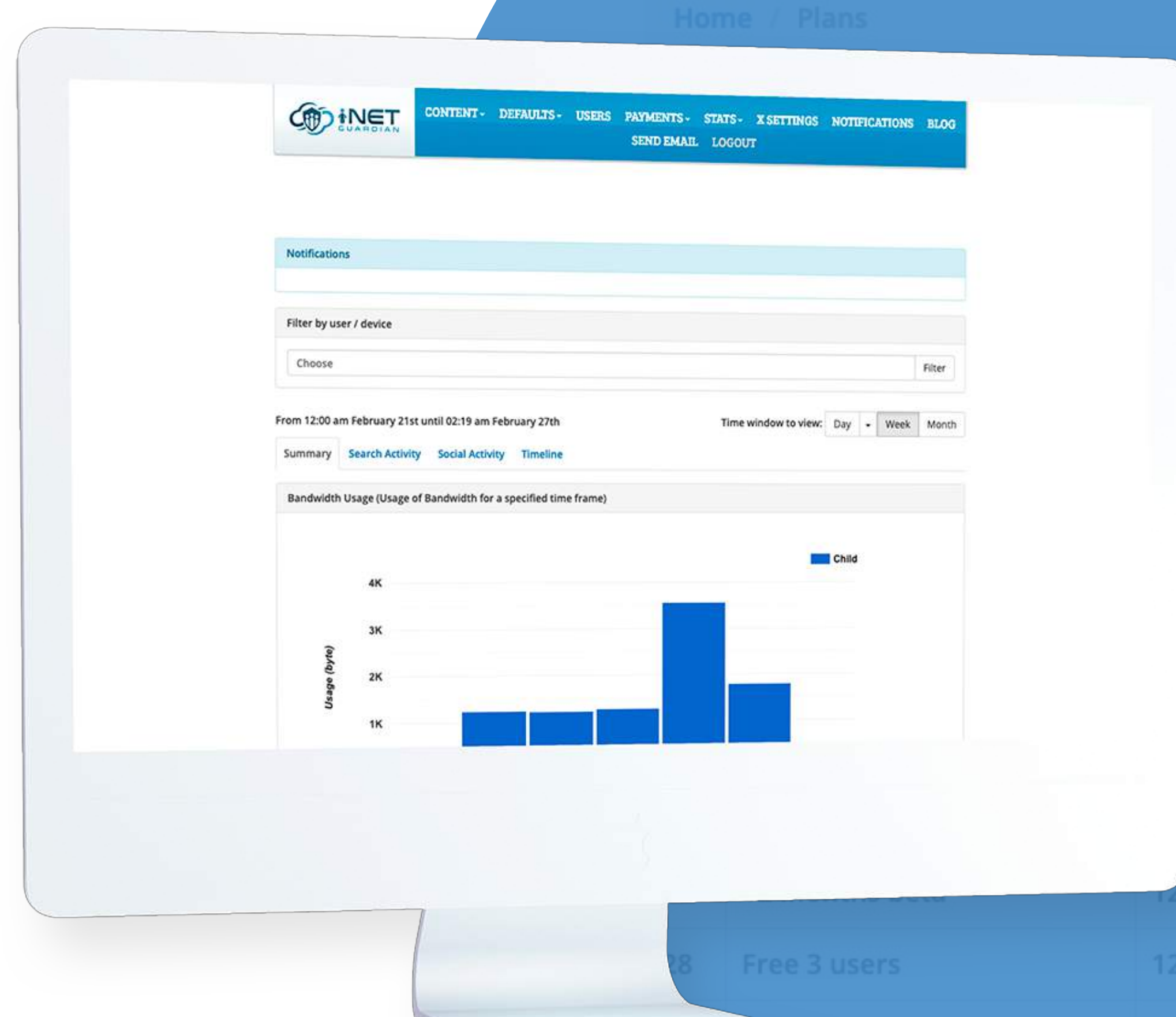


## Goal

Children's safety in the online world

## Overview

It's known that 5.43 million young people in the UK alone have experienced cyber-bullying. What a child sees and experiences online cannot be unseen! Paul and Johanna were right to assume that they need the help of IT partner to produce this project. Zfort Group took part in development of an easy-to-use tool that can help parents to make their children's browsing experience safer



Paul Ford



Johanna Ford

## Client

Paul and Johanna Ford are co-founders of Edge IT Ltd with more than 40 years' experience in the IT Industry. After having a young family of their own, they started developing an easy-to-use tool that can help parents and carers to manage their children's online world.

## Problem

We need a service that gives parents quick and easy access to their children's activity (via a dashboard) while allowing children to explore the Internet in a safe and protected way.



## Solution

Zfort Group began with the analysis of changing requirements and then created 3 different project versions. Initially, we developed a proxy server with the ability to control and block Internet traffic. Then the development team also added time and volume restrictions. Later, iOS application was implemented to make installation and configuration of network services on iPhones and iPads easier.

Now iNet Guardian works by proxying the traffic from the device to the iNet Guardian cloud service that blocks any inappropriate traffic.

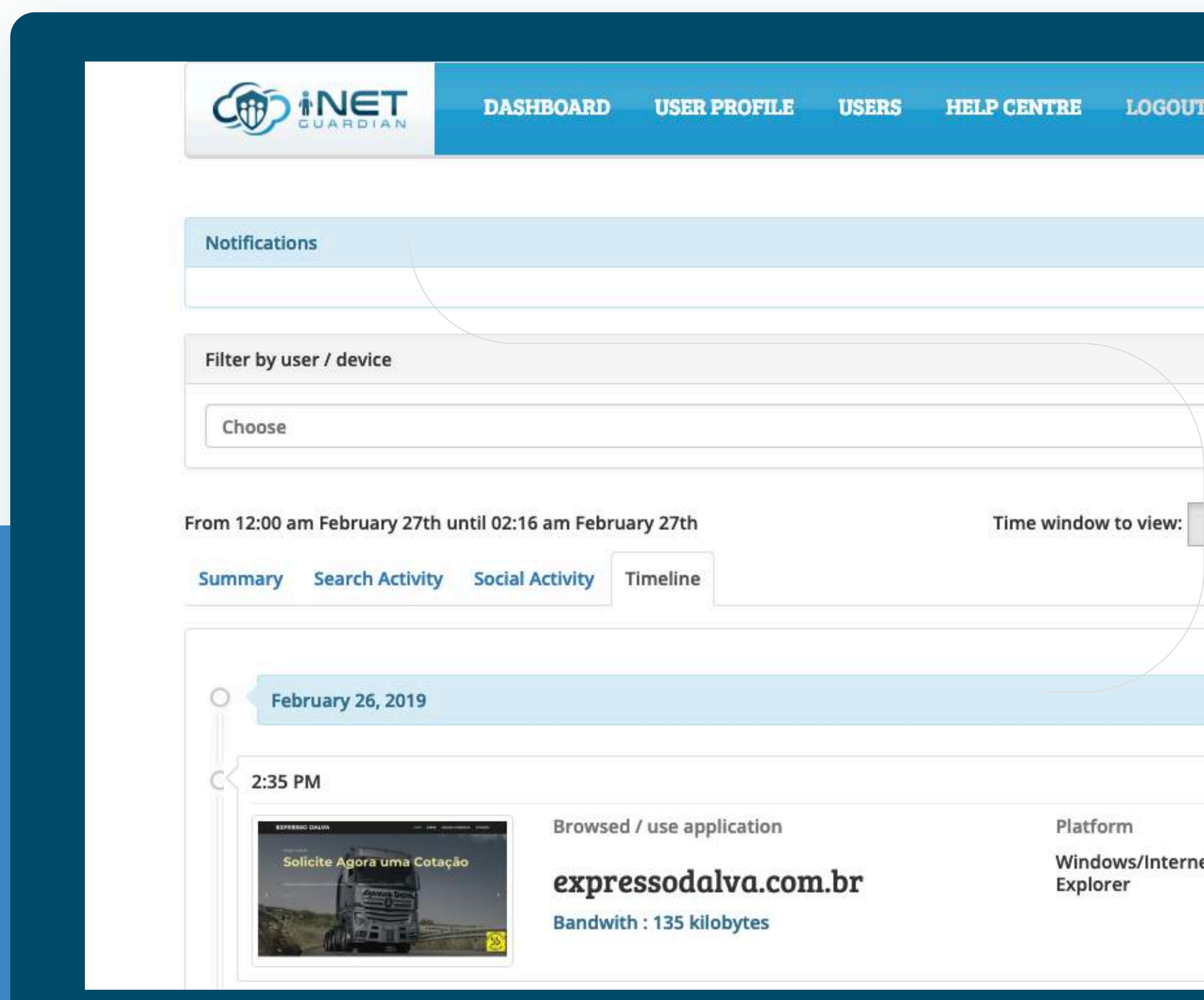
iNet Guardian allows parents and carers to have informed and practical discussions with their children, leading to a safer and more educational online experience.

### The biggest challenges in the project are:

- Processing of HTTPS (encrypted) traffic, which is computationally expensive.
- Large amount of user and connections

## Challenge

We had to create a scalable pool of on-demand proxy servers and find a good balance between number of active users and number of nodes running simultaneously.



## Key Features

### Supports Multiple Devices

The solution is compatible with iOS, Android, Windows, and Kindle devices

### Dashboard to monitor usage

Dashboard to monitor usage. Shows the top 10 sites visited, amount of time spent on those sites, top 10 sites blocked sites, amount of bandwidth consumed and can be filtered per user basis for the last day, week and month

### Limit Device Bandwidth Utilization

Limit Device Bandwidth Utilization. The amount of data that the device downloads can be limited. This is particularly useful for households who pay for a set amount of data usage a month

### Device Access Times

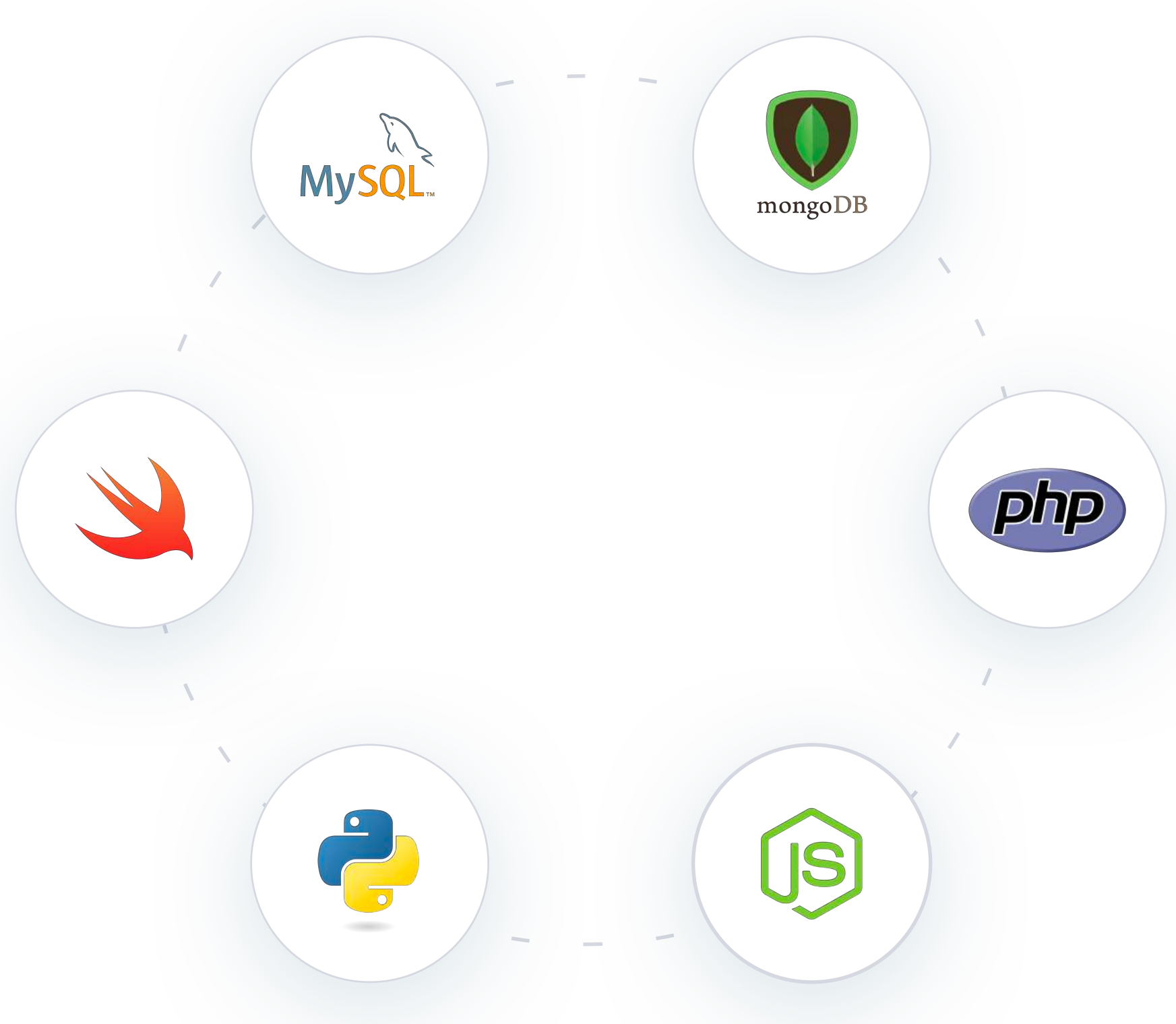
Configure the device as you wish. For example, it can only connect to the Internet for certain periods of the day such as between 4 PM and 6 PM. Also, you can create limitations, and the device will have access to the Internet only for a certain period of time in 24 hours, like 2 hours per day

### Block Inappropriate Content

Place restrictions onto the device and users will not be able to visit websites deemed inappropriate, like phishing or mature content resources

### See what websites have been visited

Check reports about visited websites and how long your child has been on these websites



## Technologies

Most of the functionality is implemented with PHP framework Yii2. The proxy components are implemented with usage of Node.js and Python (because of huge number of concurrent connections and the need to process a lot of data simultaneously). StrongSwan, an open source IPsec-based VPN solution, was used to setup connections. For iOS platform was made using Swift.

## Our Roles

- 1 Python Developer
- 1 PHP/Yii Developer
- 1 Front End Developer
- 1 iOS Developer
- 1 Quality Assurance Engineer
- 1 Project Manager
- 1 DevOps



## Results

iNet Guardian is a cloud-based service that allows parents to easily manage family online activity. This tool was designed to make children's usage of the Internet safer. The more children understand the reasons for them to stay safe online, the easier it is to incorporate online safety into their everyday lives. Our responsibility as providers of Parental Guidance software and services is to not only provide the tools to do the job, but to provide parents and carers with up to date information about trends in their children's online world.



Tell Us About Your Project

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