

General information

better traffic uses the most efficient and advanced internet technologies to enable the highest throughput, lowest load and optimal data exchange.

Tech Stack

- ✓ **Node.js** - Efficient and uncompromising technology used to program the application server. Applications based on node.js handle traffic asynchronously (which means that they can execute many queries simultaneously - at once, while, for example, applications based on PHP queue queries and handle them one by one. The better traffic service, thanks to the use of node.js technology, has been programmed in such a way that it can handle up to 70 thousand queries simultaneously!
- ✓ **Nginx** - used as an application load balancer - it "decides" whether the user should be redirected to the queue or to your website.
- ✓ **MySQL** - Database used to store information about virtual queue users.
- ✓ **Vue.js** - the administration panel of the better-traffic website was programmed based on the vue.js framework.
- ✓ **Node.js API** - The application's API is also written based on node.js.

Efficiency

To manage resources and scale applications, we use self-scaling servers in the data cloud. Individual application nodes (server, database, load balancer) are allocated appropriate resources and reserves for scaling (Cloudlets). A single cloudlet corresponds to the server resources of 128 MB of RAM and a processor clock speed of 400 MHz. A single application node (e.g. database), in its basic configuration, can operate with a maximum of 128 Cloudlets, which corresponds to exactly 16 GB of RAM and a processor clock speed of 51.2 GHz. This is a huge computing potential, which - if necessary, we can additionally scale horizontally, i.e. add additional nodes (databases or server applications), which again can be scaled up to 128 cloudlets!

What does this mean in practice?

The most common online store servers can handle between 700 and 2,000 unique users/transactions simultaneously. Each user above this level is a potential risk of a significant drop in performance or even server failure. The better traffic queuing system, even in its basic configuration, is able to accept traffic of around 200,000 users at once (of which the desired number of users - according to the configuration - will be redirected to the store) and the rest will be able to wait safely in a queue tailored to your needs.

How it works

Communication between your online store and Better-Traffic is based on dedicated integration. Better traffic software can be configured and connected to your online store in three ways:

- ✓ **.js script** - the fastest, easiest and least invasive integration method,
- ✓ **PHP script** - optimal integration method, often requires interference in the software source code and is not possible for all websites (it is limited only to those that use PHP technology),
- ✓ **DNS integration** - the most reliable integration method, in which the main domain of the store is redirected to our servers and it is on them (our servers) that all traffic management and routing takes place). This is the most reliable method, which maximally relieves the load on the store or website server.

Integrating a website with our software allows us to "capture" traffic on the website/store and redirect it directly to our better-traffic servers. Below we present sample scenarios for directing traffic (users) in a situation where the store/website is integrated with the Better Traffic software:

Scenario I - Registration of a new traffic / unique user

1. The user enters your website and in effect triggers our queuing system before it even loads any of your website content and loads your server. At this stage, our servers verify the domain from which the query originated for security and user verification purposes. At this stage, we collect basic user data that we use for data segmentation and better-traffic statistics reporting, including:
 - a. Device manufacturer,
 - b. Browser name,
 - c. Product name,
 - d. Browser version,
 - e. Operating system,
 - f. Operating system version,
 - g. IP address.
2. In the database of our application, we generate a kind of "trace" of the user, supplementing the acquired data with additional information, already used directly to operate the queuing system, these are:
 - a. Date of last page access,
 - b. Unique user identifier,
 - c. Ordinal number (user's position in the checkout queue),
 - d. An encrypted, unique identification token containing user ID information in the form of an encrypted key,

3. In the next step, the application returns the user his unique token, which is saved in the browser's temporary memory along with information about whether the user should remain in the queue or be redirected to the online store/service.

All of the above operations take place within a few (ten) milliseconds and are virtually unnoticeable to users.

Scenario II - User makes a purchase

When refreshing the store page, or making a purchase and moving to the next subpages, we verify the user token each time (we check if it is up to date). This prevents a situation in which the user, after going to your page, abandons the purchase or "goes away" leaving the page open, which could lead to blocking the queue for other users. If the token turns out to be out of date, **step 3 of Scenario I is carried out**. At the end of the entire operation, information about the date of the user's last visit is updated in the database, the user's place in the purchase queue is checked and everything is carried out according to **step 3 of Scenario I**.

Scenario III - Storing user sessions

Storing user data allows us to retain information about the user and store it in the database for a specified period of time (so that the user can, for example, leave the queue or store page, and upon return - if they return within a specified time - their place in the queue or store will be waiting for them). However, this involves the risk that - for example, if we set the session storage time to 10 minutes - users who have finished shopping will "hang" in the system for another 10 minutes and block their place in the checkout queue for users waiting in the queue. Therefore, it is recommended to use a time of maximum 300 seconds (5 min.), optimally it is 3 min.

When the user session storage mechanism is active, the queue operates as follows:

- a. Before **step 3 of Scenario I**, we check if the added user already exists in the database. If so, then the user id is retrieved and **step 3 of Scenario I is executed**. If we do not recognize the user in the database, we proceed according to **step 2 of Scenario I**.

Scenario IV - Redirecting the user to the queue

If the server returns information that the client should be redirected to the queue, the script redirects the client to <https://your-name.better-traffic.pl/queue>. The Better-Traffic queuing system itself runs in the background and checks every minute how many users have ended their session (their idle time has elapsed) - these users are removed from the queuing system database, and then Better-Traffic "counts" the people in the queue to overwrite the user's position in the queue and "move" them forward.

Full customization of the queue landing page

The default queue view looks like this: **demo.better-traffic.pl/queue**

In the administration panel, in the application settings, you can freely modify the appearance of the queue - add your own html code, CSS, and dedicated .js scripts (e.g. google analytics script). The data available within the queuing system that can be displayed in the queue view are:

- a. Your place in line,
- b. Number of people in the queue,
- c. Approximate time of redirection to the store/service,

Kopit - A powerful set of data and statistics

In the Better-Traffic app data cockpit, after logging in, you will see a number of statistics that allow you to track user data not only in the queue, but also in your service, not only in the overall perspective, but also in real time. Among other things, you can see:

- a. How many users, in total, were redirected to the queue, how many of them successfully went to the website and how many abandoned the session,
- b. How many users were in the store overall and how many were in the queue (this data can be further segmented - e.g. limited to 3 hours ago, 6 hours ago or the whole day),
- c. How many users (live data) use desktop devices, tablets or mobile devices,
- d. What web browsers are used by users (real-time data),
- e. What subpages are currently "occupied" by their users on your website (real-time data),

Better-Traffic - Configuration

After logging in to the better traffic administration panel, go to the "Settings" tab, where you can download a dedicated .js script for the queuing system. The script should be placed in the header of the website, just after the <head> tag. Then you will be asked to enter the domain of your website and the www address where the virtual queue will be available - the default address is: <https://your-name.better-traffic.pl>. As part of the Better Traffic OnDemand and Better Traffic AlwaysOn services, you can use your own internet domain. Additional queue parameters that you can configure are:

- a. People limit (this determines how many people can be on your website at the same time. All users above this limit will be redirected to the queue,

- b. Idle time - determines how long after a user leaves the store page or queue, their session data will be stored in the application database,
- c. Save user sessions (yes/no) - a mode that allows you to match user information to their session (this prevents you from "cheating" the queuing system when using e.g. the browser's incognito mode),

Frequently asked questions

What technologies does better traffic software support?

Better traffic is a software dedicated to web applications, so it will be perfect for handling traffic in your online store or service, regardless of the technology (SPA / PWA / WWW). Currently, better traffic does not support native mobile applications - we do not plan to develop our software in this direction in the near future.

Can I manage more than one domain from one account?

Better traffic currently allows for the simultaneous activation of only one queue on one website (domain). However, you can change the queue configuration at any time, so it is not a problem to support several different domains and several different queues from one account - provided that they are not launched in parallel (at the same time). Additionally, better traffic user accounts are created for a natural or legal entity - this means that you can support a virtual queue for several different domains (websites or online stores), as long as you are their legal owner, otherwise, they will be settled individually or will require the creation of an individual account in the better-traffic system.

How efficient is better traffic software?

To manage resources and scale applications, we use self-scaling servers in the data cloud. Individual application nodes (server, database, load balancer) are allocated appropriate resources and reserves for scaling (Cloudlets). A single cloudlet corresponds to the server resources of 128 MB of RAM and a processor clock speed of 400 Mhz. A single application node (e.g. database), in its basic configuration, can work with a maximum of 128 Cloudlets, which corresponds to exactly 16 GB of RAM and a processor clock speed of 51.2 GHz. Converting this to users, so far our most crowded queues, which served several dozen thousand users simultaneously, used less than 13% of our server resources - in their basic configuration :) So, we are ready for anything!

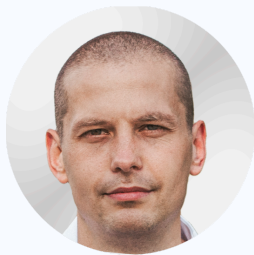
Does the virtual queue start automatically?

All you need to do is implement a virtual queue script in your website or online store and the queue will be active by default. You can deactivate it in the administration panel at any time. The virtual queue will start automatically for each user who exceeds the limit of users you set who can be on the website/service/online store at the same time. You don't have to set anything else, just observe the statistics with satisfaction :)

How to implement and configure the better traffic service?

The entire implementation rests on the shoulders of our team. From your side, we expect you to choose the type of cooperation and guidelines regarding the appearance of the active queue Landing Page template.

Kind regards,



Alexander Gołaszewski
CEO & Founder

alek@unlimitech.dev
[724 787 012](tel:724787012)

bettertraffic

Handle your website traffic, better.

Better Traffic software is owned by Unlimitech Sp. z o. o.