

General information

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

Technology stack

- ✓ **Node.js** - A powerful and uncompromising technology used to program the application server. Applications based on node.js handle traffic asynchronously (which means they can execute multiple queries simultaneously - at once, while, for example, applications based on the PHP language 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 70,000 queries simultaneously!
- ✓ **Nginx** - used as an application load balancer - this is what 'decides' whether the user should be redirected to the queue or to your website.
- ✓ **MySQL** - Database used to store information about the users of the virtual queue.
- ✓ **Vue.js** - based on the vue.js framework, the administration panel of the better-traffic website was programmed.
- ✓ **Node.js API** - The application API is also written based on node.js.

Performance

We use self-scaling data cloud servers to manage resources and scale the application. The individual application nodes (server, database, load balancer) are allocated appropriate resources and reserves for scaling (Cloudlets). A single Cloudlet corresponds to a server resource of 128mb of RAM and a processor clocking of 400Mhz. A single application node (e.g. a database), in its basic configuration, can operate with a maximum of 128 Cloudlets, which corresponds to exactly 16 GB of RAM and a processor clocking frequency of 51.2 GHz. This is an enormous computing potential, which - if necessary - can be further scaled horizontally, i.e. additional nodes (databases or server applications) can be added, which again, can be scaled up to 128 Cloudlets!

What does this mean in practice?

The most common webshop servers can handle between 700 and 2,000 unique users/transactions simultaneously. Any user above this level is a potential risk of significant performance degradation or even server failure. The better traffic queuing system, even in its basic configuration, is capable of accepting

traffic in the order of 200,000 users at a time (of which the desired number of users - according to the configuration - will be redirected to the shop) and the rest can safely wait in a tailor-made queue.

How it works

The communication between your online shop and the better-Traffic service is based on a dedicated integration. The better-traffic software can be configured and connected to your online shop in three ways:

- ✓ **.js script** - the fastest, easiest and least intrusive method of integration,,
- ✓ **PHP script** - the optimal integration method, often requires interference with the software source code and is not possible for all websites (it is limited only to those using PHP technology),
- ✓ **DNS integration** - the most reliable method of integration, in which the shop's main domain is redirected to our servers and it is there (our servers) where all traffic management and routing of this traffic takes place). This is the most reliable method, which relieves the server load of the shop or website as much as possible.

Integrating a website with our software enables us to "capture" the traffic of the website/shop and redirect it directly to our better-traffic servers. Below are examples of traffic (user) routing scenarios in a situation where the shop/website is integrated with the Better Traffic software:

Scenario I - Registration of new traffic / unique user

1. The user accesses your website and, as a result, triggers our queuing system before any website content has even loaded and put a load on your server. At this stage, our servers verify the domain from which the request originates for security and user verification purposes. At this stage we collect basic data about the user, which we use for data segmentation and reporting statistics in the better-traffic system, these include:
 - 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 user "footprint", supplementing the acquired data with additional information that is already used directly to operate the queuing system, these are:
 - a. Date the page was last called up,

- b. Unique user identifier,
 - c. Sequential 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's unique token, which is stored in the browser's temporary memory along with information on whether the user should remain in the queue or be redirected to the shop/web service.

All the above operations take place over the space of a few(ten) milliseconds and are virtually imperceptible to users.

Scenario II - User completes the purchase

When refreshing the shop page, or completing a purchase and moving to subsequent pages, we verify the user's token each time (check that it is up to date). This prevents the user, once on your site, from abandoning the purchase or "walking away" leaving the page open, which could lead to blocking the queue for other users. If the token proves to be out of date, **step 3 from Scenario I** is implemented. At the end of the whole operation, the information about the date of the user's last visit is updated in the database, the user's place in the queue for purchase is checked and everything according to step 3 of **Scenario I is implemented.**

Scenario III - Storage of user sessions

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

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

- a. Before **step 3 of Scenario I**, we check whether the added user already exists in the database. If yes, then the user id is retrieved and step 3 of Scenario I is implemented. If we do not recognise the user in the database, we proceed with step **2 of Scenario I**.

Scenario IV - Redirecting a user to a queue

If the server returns a message that the customer is to be redirected to the queue, the script redirects the customer to **<https://your-name.better-traffic.com/queue>**. The Better-Traffic queuing system itself runs in the background and checks every minute to see how many users have ended their session (their idle time has expired) - these users are removed from the queuing system database, and Better-Traffic then 'recalculates' the people in the queue to overwrite the user's position in the queue and 'move them forward'.

Full personalisation of the queue landing page

The default queue view looks as follows: **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 queue system that can be displayed in the queue view is:

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

Dashboard - Powerful set of data and statistics

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

- a. How many users, overall, were redirected to the queue, how many of them successfully navigated to the website and how many abandoned the sessions,
- b. How many users in total were on the shop and how many were in the queue (this data can be further segmented - e.g. limited to 3 hours back, 6 hours back or a whole day),
- c. How many users (live data) are using desktop, tablet or mobile devices,
- d. Which web browsers users use (real-time data),
- e. Which sub-pages are currently "occupied" by their users on your website (real-time data),

Better-Traffic - Configuration

After logging into the better traffic administration panels, go to the "Settings" tab, from where you will download the dedicated .js script of the queuing system. The script should be placed in the header of

your website, just after the <head> tag. You will then be asked to enter the domain of your service and the address, www, where the virtual queue will be available - the default address is: <https://your-name.better-traffic.com>. Within the Better Traffic STANDARD and Better Traffic PREMIUM services, you may use your own Internet domain, e.g.: <https://wait.your-domain.com>. Additional queue parameters that you can configure are:

- a. People limit (determines how many people can be on your website at any one time. All users above this limit will be redirected to the queue,
- b. Idle time - determines how long after the user leaves the shop page or queue, their session data will be stored in the application database,
- c. Save user sessions (yes/no) - a mode that allows the user's information to be matched to the user's session (this prevents the queuing system from being "fooled" when using the browser's incognito mode, for example),

us that traffic to your website will be 'captured' by the queuing service before any of the website content is loaded, completely eliminating the risk of overloading your server.

Operating with .js scripting is much more efficient, secure and easier to implement than similar solutions from competitors, whose architecture requires changing the domain's DNS records and 'delegating' the domain to external servers - which can cause problems with the operation of such applications when using CDN servers, or using shared servers that do not have a dedicated IP assigned. Better-traffic solves these problems using just the use of asynchronous .js scripting on the site.

The script has been written in such a way as to prevent the user from loading the site's content, even if it is blocked in the browser's console - you don't have to worry that some skilled programmer will try to "jump the queue" or bypass it - blocking or bypassing the script explicitly involves blocking the site's ability to render.

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RENTAL OF BETTER-TRAFFIC SOFTWARE (better-traffic.com)	NET PRICE
Better-Traffic software lease installation fee (first month). The fee includes server configuration, software installation and deployment and configuration of the default queue template. The fee does not include modification of the Landing Page view of the better-traffic queue. One-time fee.	215 \$ / otf*
Better Traffic OnDemand (Maintain) - Mandatory maintenance fee for leasing Better-Traffic software (consecutive month) in OnDemand mode. Fee charged on a monthly basis, in advance for the month of use.	69 \$ / month
Better Traffic OnDemand (Queue) - Additional service charge for each time the better-traffic software is launched in OnDemand mode. A launch is considered to be any month in which the customer's web traffic exceeds the limit set in the configuration of the better-traffic service and part of the traffic is redirected to the virtual traffic queuing service for a period of not less than 10 minutes. In a given month, the service fee is charged at most only once.	235 \$ / month

Better Traffic AlwaysON (Maintain & Queue) - Monthly fee for leasing better-traffic software in AlwaysON mode. The fee is fixed each month, regardless of how many times the better-traffic software is run. For AlwaysON mode, the lease fees and service charge associated with OnDemand mode do not apply.	165 \$ / month
1 man-hour of IT / programming / maintenance / graphic design / consultancy / other maintenance services (e.g. modifications to the Landing Page view of the active queue or implementation of dedicated functionalities).	45 \$ / mh

* **One Time Fee**

Frequently asked questions

What technologies does better traffic software support?

Better traffic is dedicated to web applications and is therefore ideal for handling traffic to your shop or website, regardless of the technology (SPA / PWA / WWW). Better traffic does not currently support native mobile applications - we have no plans to develop our software in this direction in the near future either.

Can I handle more than one domain from one account?

Better traffic currently only allows one queue to be activated at a time on one website (domain). However, you can change the queue configuration at any time, so it is not a problem to operate several different domains and several different queues from one account - provided they are not run in parallel (at the same time). In addition, better-traffic user accounts are set up per physical or legal entity - this means that you can operate a virtual queue for several different domains (websites or online shops) as long as you are their legal owner, otherwise, they will be billed individually or require an individual better-traffic account.

How efficient is better traffic software?

We use self-scaling data cloud servers to manage resources and scale the application. The individual application nodes (server, database, load balancer) are allocated appropriate resources and reserves for scaling (Cloudlets). A single Cloudlet corresponds to a server resource of 128mb of RAM and a processor clocking of 400Mhz. A single application node (e.g. a database), in its basic configuration, can operate with a maximum of 128 Cloudlets, which corresponds to exactly 16GB of RAM and a processor clocking frequency of 51.2 GHz. Converting this into users, to date, our busiest queues, which served tens of thousands of simultaneous users, used less than 13% of our servers' resources - in their basic configuration :) Also, we are ready for anything!

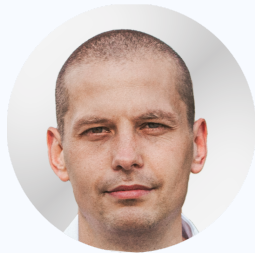
Does the virtual queue start automatically?

All you need to do is implement the virtual queue script in your website or web shop and the queue will be active by default. You can deactivate it in the administration panel at any time. The virtual queue will be activated automatically for each user who exceeds the limit of users you set who can be on your website / service / e-shop at the same time. You do not need to set anything else, just watch the statistics with satisfaction :)

How do I implement and configure the better traffic service?

The entire implementation rests on the shoulders of our team. From your side, we expect to choose the type of collaboration and the design guidelines for the Landing Page template of the active queue.

Yours sincerely,



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bettertraffic

Handle your website traffic, better.

Better Traffic software is owned by Unlimitech Ltd.