



Polarsport.pl

**How ecommerce backend
optimization increased revenue
by 66%**



Case study

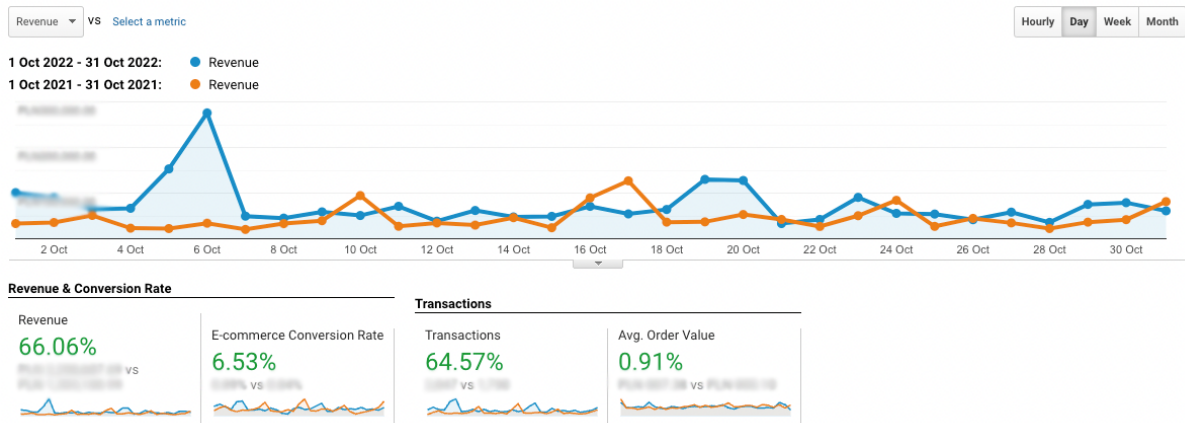
Polar Sport is one of the largest outdoor retail chains in Poland and has been an Alpacode client for ages. Last year we optimized the frontend and the backend, which resulted in passing the s Core Web Vitals Assessment Passed and better and faster metrics. You can read about our work [here](#).

However, optimization is a never-ending process. After a few months the time comes to provide the next improvements, mostly on the backend.

Results

An increase of up to **66%** in revenue.

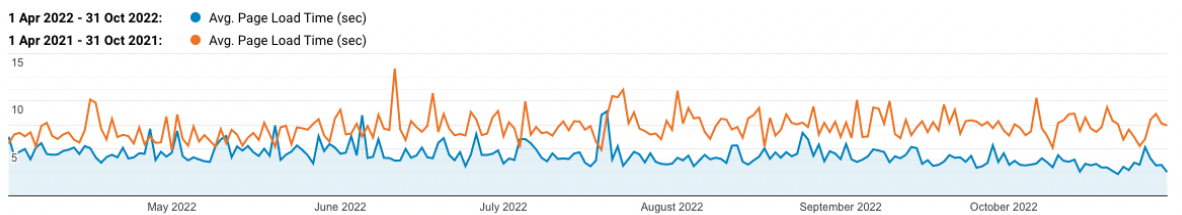
- **6,53 %** in conversion rate
- **64,57%** in transactions
- **0,91%** in avg order value



Comparison y/y before (1-31.10.2021) and after optimization 1-31.10.2022

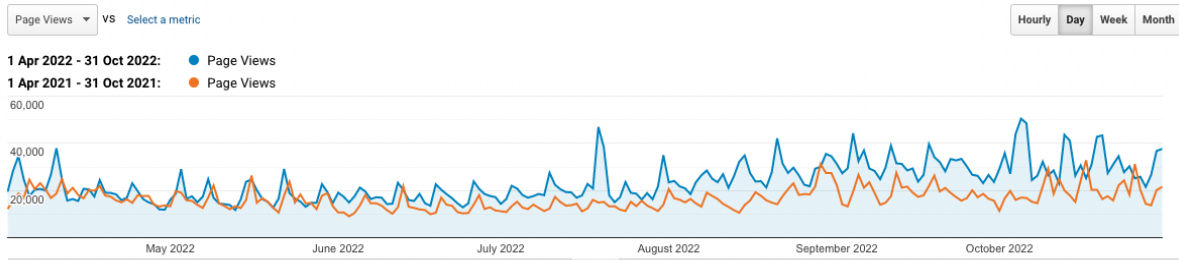
Avg Page Load Time

Decrease **41%**



Page Views

- Page Views increase **42,65%**
- Unique Page Views increase **39,17%**



Page Views

42.65%

VS



Unique Page Views

39.17%

VS



Users

- All users increase **46,09%**
- New users increase **46,06%**
- Sessions increase **41,01%**

Users ? ↓	New Users ?	Sessions ?
46.09% ↑ VS	46.06% ↑ VS	41.01% ↑ VS

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We predict the future of ecommerce



What we have done:

1. Slim down and cleaning of the database (from almost 12GB to 5GB), cleaning customer logs and unnecessary report tables. Database cleaning takes place cyclically on an ongoing basis, which strongly prevents it from swelling. It wasn't just a one-time cleaning
2. Improvement of the mechanism for cleaning outdated quotes (carts data) in the database.
3. Introduction of a mechanism for removing temp tables after reindexing.
4. Server changes, PHP upgrades, Percona and Varnish.
5. Removal of unused plugins and modules: 24 unnecessary modules have been removed.
6. PDP profiling: disabling the wishlist and unused reports, code optimization.
7. Profiling custom listings, code optimization.
8. Blocking unwanted indexing robots and specifying the subpages they have access to (through the robots.txt file and appropriate SEO changes).

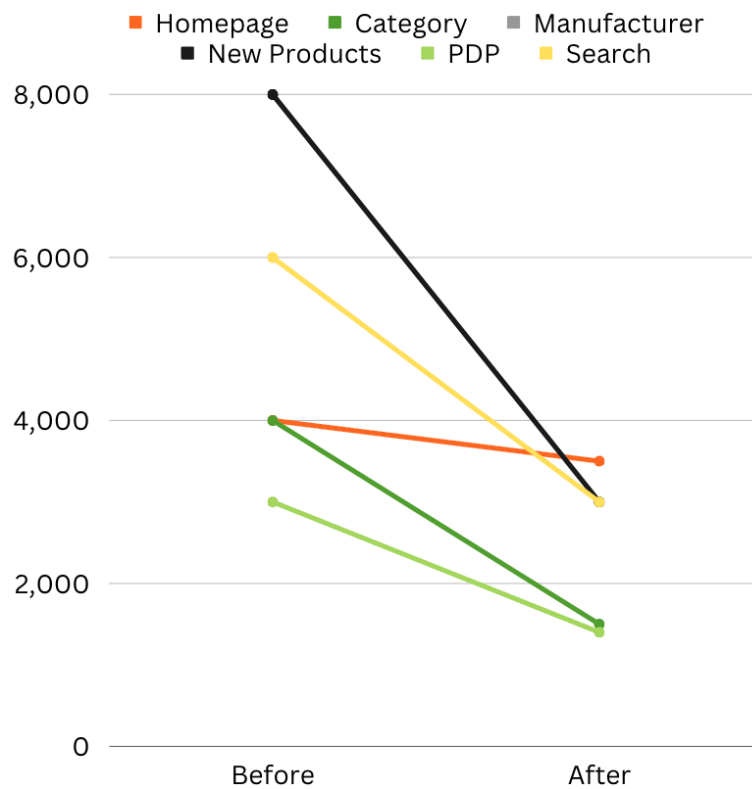
Results in NewRelic, avg:

A decrease in web transaction time from 2000-3000ms to 1000-1500ms, including:

- MySQL times down from 1000-1500ms to 500-600ms
- Drop in PHP times from 1000-1200ms to 600-700ms
- Increasing and maintaining Apdex score for the End User from around 0.91 to around 0.97



NewRelic - results in detailed pages:

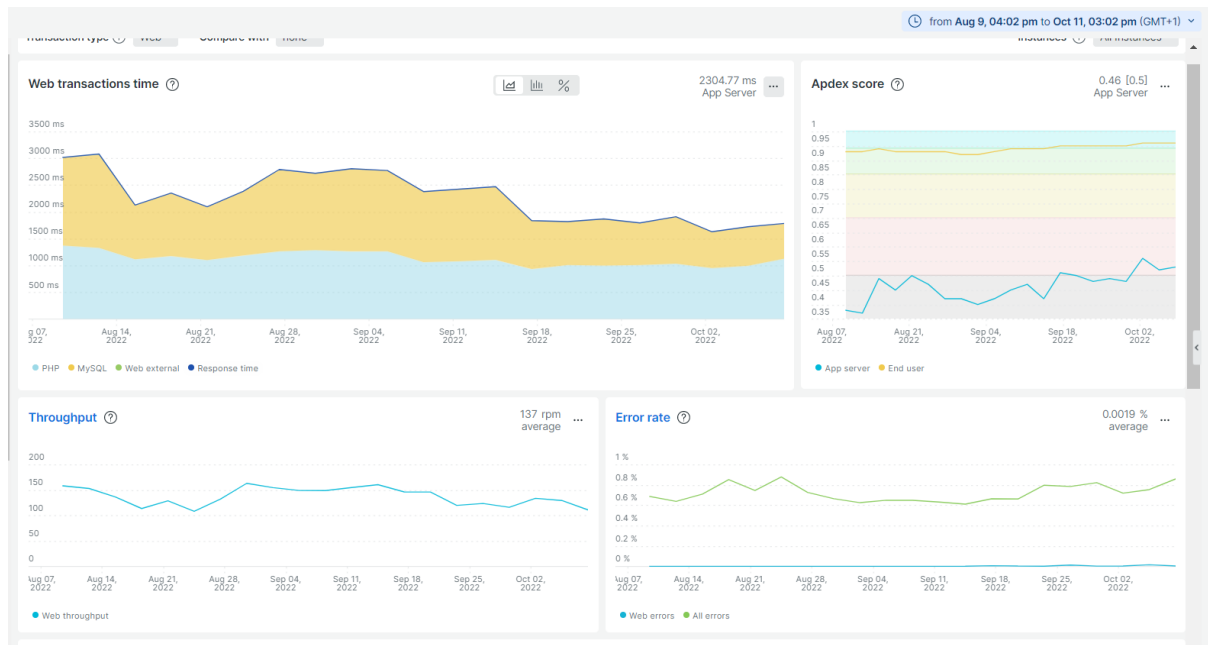


Business impact: a better user experience. Before the optimization there were issues with crashes on databases, indexes were jamming during high traffic. After the database was cleared, these incidents stopped. Also, excessive traffic of crawlers overloaded the website and database, after appropriate SEO changes the problem stopped.



The decrease in MySQL times is especially visible, - related to the cleaning and unloading of the database. The increase in the Apex score for the App user also looks good.

Apdex score - after optimization



Apdex Score

The Apex score chart shows a score of 0.46 [0.5] for the App Server. The chart is a stacked area chart with three layers: End user (top, light blue), App server (middle, light green), and End user (bottom, light red). The score is 0.96 for the End user and 0.53 for the App server. Below the chart, there is a video player titled 'What Is Apdex ...' and a text box explaining the metric.

What is Apdex?
Apdex is an industry standard to measure users' satisfaction with the response time of web applications and services. It's represented as a score from 0-1.

What's a good Apdex score?
The closer your score is to 1, the better your app is performing. The default value for a satisfactory experience is 0.5 seconds, or you can set a different target for your app under Settings.

[See our docs](#)



We have done more work but we are still waiting to implement the following:

- Removing unused photos from the media folder.
- A module for removing unused products and their url rewrites
- JS Bundling module
- A module for removing unused attributes and attribute options.
- A module responsible for the automatic optimization of photos uploaded by the administration panel and generated by the Magento engine.

Optimization is a process. We are still working on improvements and implementing new, modern solutions.

[Contact us!](#)

We know how to improve your ecommerce!

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