



Implementing best practices for multi-site management

Establishing a new, next-gen frontend platform for managing all of Internet Fusion's e-commerce brands.

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Internet Fusion is an online conglomerate retailer that has been growing steadily and now turns over in excess of £100m per year. Key to their success and growth is achieving efficiency and competitive edge through technology.

BACKGROUND

Internet Fusion's ever-growing stable of over a dozen online retail brands currently includes Surfdomo (surf, snow, skate, and outdoor apparel); Blackleaf (outdoor apparel); Extreme Pie (extreme action sports supplies); Nightgear (military clothing and hardware); Country Attire (rural and countryside apparel); Dirt Bike Bitz (motorbike spares and accessories); and Derby House (the UK's leading equestrian retailer).

The e-commerce experience across all their sites had to be smooth and intuitive. To achieve this, Internet Fusion wanted to create a unified platform, which could be applied across all of their sites, improving maintenance management.

CHALLENGES

We needed to create a platform that would enable Internet Fusion to run multiple sites from a single codebase. We needed to take an innovative approach to this challenge. Not only this but the state management was a notable challenge during this project, this was because all the sites had different requirements regarding their UIs, and the existing method of using jQuery to fetch all data to the front-end made the system unacceptably slow.

The other existing challenge was the need to make all the required changes but maintain the Google indexing for their sites.



SOLUTION

We took an innovative approach to this project, which saw us develop the concept of a 'core' system with all the functional logic, which was able to run on its own. Using npm links, the core system was linked to separate themes (which matched the branding for individual sites) enabling the running of multiple sites from one codebase. The system was developed with React, which had a good supporting ecosystem, and was well supported by its community. React also presented a straight-forward means of porting the solution to an app for mobile devices if required, using React Native. This consistent approach would help to maintain good response times on mobile devices.

In addition to the React framework, we wanted the interactive features of the site to be as responsive and intuitive as current technologies could make them. Because of this, we chose the latest version of Bootstrap as this framework uses CSS3, allowing the most cutting-edge features to be implemented.

To address the issue of state management we integrated the Redux state-management library, which significantly improved performance as well as timing in these areas.

Internet Fusion also wanted to maintain Google indexing for their sites, while simultaneously ensuring that they were all run on single-page applications. We implemented Server-Side Rendering (SSR) to achieve this. The HTML Google needed to index the sites would be produced on the server side, rather than usual client side, so the sites could be run on a single-page application that used data provided by the server, yet also be picked up by Google for indexing.

RESULTS

Our determination to deliver to the exacting standards of our client means that Internet Fusion now has a unified front-end site that gives them the edge over their competition. This has also meant that the system is now aligned with their vision of the experiences customers should enjoy when visiting one of their sites.

We have also helped make provisions for Internet Fusion's future, by not only delivering the functionality they requested but showing them how they can make continuous improvements by adhering to best practices and industry standards. This will save the company money on future development, as our advice should enable them to undertake it in-house.

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Technologies used:



REACTJS



REDUX



NODEJS



PHP



BOOTSTRAP

JavaScript | Node.js | React | Redux | PHP | MySQL | ElasticSearch | HTML | CSS | SASS | Bootstrap
SPA | API | SSR | AWS | CI/CD | TDD



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