

Case Study

Digital Commerce Modernization & Martech Integration

To scale a legacy eCommerce infrastructure for enhanced performance, security and marketing intelligence



PROJECT OVERVIEW

A U.S.-based industrial equipment manufacturer partnered with Rishabh Software to modernize its legacy Industrial eCommerce platform, digitize manual processes, and unify departmental data. The goal was to deliver a scalable, modular, cloud-based solution integrating AI-driven automation and analytics to improve marketing visibility, platform performance, cost efficiency, and long-term growth.


Capability
App
Modernization


Industry
Industrial
Manufacturing


Country
United States

KEY FEATURES

We modernized the client’s digital eCommerce solution using nopCommerce and Azure cloud to enhance scalability, operational efficiency, and marketing performance. Key solution features include:



Performance Optimization

Advanced Redis caching and Cloudflare WAF enhanced responsiveness and reduced server load. Consolidated Azure App Services reduced costs and improved resource allocation.



AI-Enhanced Product Search

Azure Cognitive Search replaced traditional queries, using semantic ranking, fuzzy matching, natural language suggestions, and filters to deliver faster, more relevant results and reduce cart abandonment.



Marketing & PPC Centralization

Integrated Google Ads, Amazon Seller Central, and Microsoft Ads within nopCommerce for unified campaign management. A rules-based analytics engine optimized campaign performance and ROI.

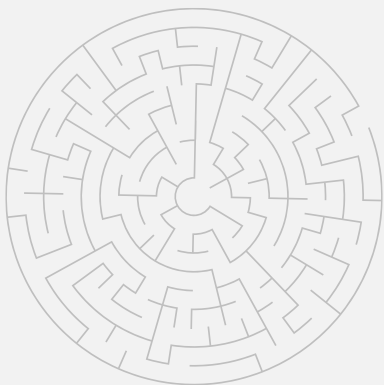


Automated Order Fulfillment & Checkout

Fully automated order processing, invoicing, and address verification with ML-powered APIs improved accuracy, minimized errors, and reduced abandonment rates.

CHALLENGES

- Slow page load times increased bounce rates and cart abandonment.
- Lack of unified campaign data prevented insights into channel performance, creative effectiveness, and promotion ROI.
- Automated traffic distorted conversion metrics and triggered false fraud alerts.
- Manual management across multiple ad platforms increased errors and inefficiencies.
- Over-provisioned infrastructure inflated costs without improving performance.



SOLUTION

We migrated the nopCommerce platform to a streamlined Azure architecture, centralized marketing data from Google, Amazon, and Microsoft within the admin panel, and automated checkout, fulfillment, and security processes.



eCommerce Platform Modernization

- Consolidated six Azure App Services into two optimized environments.
- Migrated SQL workloads to Azure Hyperscale for improved performance and reduced costs.



Unified Martech & Real-Time Analytics

- Integrated Google Tag Manager (GTM), GA4, and Ads APIs directly into nopCommerce for centralized campaign management.
- Implemented a rules-based analytics engine for real-time campaign optimization and improved ad spend decisions.



AI-Enhanced Product Search

- Integrated Azure Cognitive Search featuring NLP, semantic search, synonyms, and intelligent suggestions to enhance discoverability and reduce server load.



Security Hardening & Traffic Management

- Deployed Cloudflare WAF with bot mitigation, DDoS defense, and custom edge filtering rules.
- Implemented AI-based anomaly detection to automatically identify and manage suspicious activity.

TECHNOLOGIES & TOOLS



Outcomes

63%

increase in orders year over year

39.4%

increase in platform users

16-20%

YoY Sales growth for 3 consecutive years

ABOUT RISHABH SOFTWARE

As a Digital Engineering and Enterprise Transformation leader, we empower businesses to scale, innovate, and thrive in today's digital-first world through technology rooted in trust and transparency. We leverage emerging capabilities such as Cloud, Data Engineering & Analytics, AI, Automation and Application Engineering to drive digital transformation and unlock new opportunities. We have successfully served across 25+ countries, and we work towards customer delight as "WE CARE."

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