

# POWERING ECOMMERCE TRANSFORMATION

## Transform Ecommerce and Retail through Real-time Data and Analytics



### Friction-free Customer Experience is Critical

To create a truly friction-free shopping experience, wouldn't having the ability to deliver the right offer, price or purchase approval in the fastest time possible be ideal? Given low online switching costs, ecommerce providers must offer a great experience to attract and keep customers. These decisions need to happen in milliseconds, supporting diverse applications while processing all the appropriate data available.

### Challenges in the Ecommerce/Retail Industry

There are constant challenges in the ecommerce industry ranging from preventing fraud, staying competitive with transparent pricing, and users demanding a rich, easy to use online and mobile site. Ecommerce is gaining momentum as an industry while becoming a major source of the overall retail market. E-tailers and retailers alike need to invest in technologies that will help them keep ahead in a competitive market.

Unfortunately, conventional underlying database architectures in use weren't designed for such rigors and have known limitations. For example, catalog data is kept in systems of record, but can be slow to be updated, leaving vendors at risk of an out-of-stock situation. Worse, a poorly performing front-end system won't be able to make a real-time recommendation, nor offer a price promotion on-the-spot, or worse, be slow to represent a catalog item on-page before the consumer abandons in favor of a competitor.

## Aerospike Powers Ecommerce Applications through Proven Solutions



#### Fraud Prevention

Vet inbound business transactions to provide real-time risk assessment and decisioning.



#### Recommendation Engine

Increase online engagement with a fast data layer to support multiple requests per recommendation.



#### Messaging and Chat

Upsell and cross-sell to online users while maintaining user session data.



#### Dynamic Pricing

Set flexible prices enabling real-time pricing and promotions for products or services based on current market demands, user profile, and inventory levels.



#### Catalog Search

Create a fast data access layer with your system of record. Accurately update your inventory in real-time for your customers by replacing your cache database.



#### Mobile Payments

Power your payment solutions and enable digital wallets, increasing customer loyalty while reducing payment friction.

## Case Study: \$4B Ecommerce Site Sets its Course for Growth

A \$4 billion ecommerce provider in the home furnishings space was looking to upgrade its environment from a brittle, unscalable, inflexible data architecture to one that could support and foster its 30% CAGR.

They were looking to increase performance of response times of their ecommerce applications, reduce complexity of supporting their data environment, and lower their total cost of operations.



### Their ecommerce applications in need of help were their in-the-moment:

- Recommendation engine
- Customer behavioral analytics
- Catalogue
- Pricing

### Results with Aerospike:

- Less discarded shopping baskets and better product selection with response times below 1 millisecond
- Lower TCO with 1/8th the server footprint of the incumbent Redis and Memcached solution
- Improved customer satisfaction and wallet share
- 30TB now able to grow to 75TB

## Case Study: Snapdeal, Large Indian Online Marketplace, Accelerates Personalized Web Experience with Aerospike



Snapdeal, one of India's largest online marketplaces, needed to deliver real-time dynamic pricing while maintaining consistently high availability and responsiveness for millions of consumers purchasing products from over 20000 sellers. The current solution, a combination of MySQL and MongoDB, resulted in response times that slowed to more than a second, resulting in a compromised shopping experience and led to lost revenue opportunities. In addition, they had to artificially spread out their updates throughout the day, unable to update prices in real-time.

### The specific needs as defined by Snapdeal were:

- Cost-effectiveness
- Concurrent reads and writes, which can easily scale up with added hardware
- Performance that was very good at the 95-99<sup>th</sup> percentile

### Benefits with Aerospike:

- Improved customer experience with predictable low latency with 95-99% of transactions completing within 10 milliseconds
- Extremely high throughput of transactions
- Best price/performance including hardware and ease of operation

## Summary of Top Benefits with Aerospike for Ecommerce

- Create a better customer experience for your catalog search and account inquiries with an improved data-access layer, a robust messaging-chat solution, and user profile store.
- Increase top-line revenue with a database infrastructure that is faster and more powerful for your recommendation engines, dynamic pricing, fraud prevention and digital payment technologies.
- Extremely high throughput of transaction
- Best price/performance including hardware and ease of operation

### About Aerospike

Aerospike is trusted by leading enterprises around the world to help them confidently deploy mission critical, strategic operational applications that make digital transformation possible. Our enterprise-grade database is deployable anywhere, delivers unmatched uptime, predictable performance, and exceptionally low TCO. Aerospike has customer deployments that have run for years with no service disruption, handling hundreds of terabytes of data, supporting trillions of transactions per month, with sub-millisecond latency. Aerospike customers include Adobe, Airtel, FlipKart, Kayak, Nielsen, Nokia, and Snap. ©2018 Aerospike, Inc. All rights reserved. Aerospike and the Aerospike logo are trademarks or registered trademarks of Aerospike. All other names and trademarks are for identification purposes and are the property of their respective owners.