

INTEGRATING AEROSPIKE WITH OTHER ENTERPRISE SYSTEMS

Highlights

- Streams change notifications using the new XDR protocol from Aerospike to downstream streaming applications via Kafka
- Allows streaming applications to stream data into Aerospike
- Seamless integration between Aerospike and other enterprise systems, including legacy systems, through Kafka
- Enables event driven

Overview

Real-time connectivity of databases and systems is critical in enterprises adopting Digital Transformation to support super-fast decisioning to drive applications like fraud detection, digital payments, recommendation engines. This requires real-time data movement from the edge to the core and back. Companies with existing legacy data infrastructures also have the same requirements, in addition to integrating with their existing systems. These enterprises depend on messaging systems like IBM MQ, Tibco, Rabbit MQ and various ESB systems as their core “plumbing” for data. Most of them are moving to support Kafka, which is one of the next generation distributed messaging systems built on Publish/Subscribe paradigm.

Connecting Aerospike in real-time with Enterprise Systems through Kafka

Aerospike Connect for Kafka leverages the new XDR protocol in Aerospike 5 for higher performance at scale in enterprise Kafka-based streaming pipelines. Kafka provides a data bus that allows applications to publish and subscribe data through named topics. This integration enables Aerospike Database 5 to pull data from Kafka and to submit Aerospike change notifications via the Aerospike XDR protocol to Kafka. Other applications and data stores can subscribe and publish to Aerospike Database clusters.

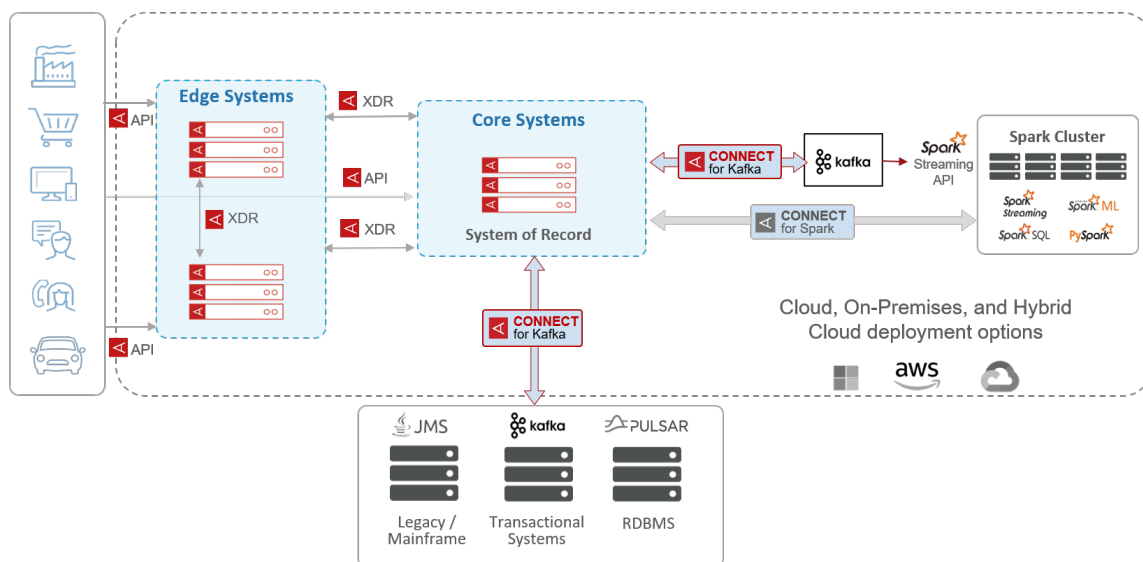


Figure 1. Aerospike Connect for Kafka

Solution Brief: Aerospike Connect for Kafka

It supports bi-directional movement of data through messaging with Kafka enabling enterprises to deploy and integrate Aerospike seamlessly with other systems.

Key features of Aerospike Connect for Kafka

- Stream change notifications from Aerospike, using the XDR protocol, to the downstream streaming applications
- Support various message formats such as Apache Avro (w/ and w/o schema registry), MessagePack, JSON and Flat JSON, making app intergration easier
- Ability to route messages based on namespaces, sets, bin values, and static topic names from Aerospike to the downstream application via Kafka
- Transform the messages going out of Aerospike to downstream applications via Kafka
- Stream data into Aerospike from Streaming applications without worrying about the differences in data models between Aerospike and the source systems

Benefits

- Enterprise wide connectivity of Aerospike utilizing the Kafka as a message bus
- Enables event driven architecture & Microservices architecture
- Ability to integrate Aerospike with Kafka sinks and sources that are not directly supported by Aerospike
- Make Aerospike a part of your high throughput and low latency streaming pipeline
- Lower TCO by leveraging the cost efficiencies of Aerospike and Kafka
- Deploy Anywhere

Typical Use Cases for Aerospike Connect for Kafka

Financial Services and FinTech: Bridge legacy systems such as Mainframes to modern services such as Fraud detection, risk management, etc. using Kafka and Aerospike, to enable new banking financial services applications

e-Commerce and Retail / CPG: Behavior data integration, clickstream integration with product data

Telco: Stream data from the Aerospike system that is used for high velocity and high volume ingest at the edge system in the IoT architecture to the back-end core systems for persistent storage, training AI/ML models, and analysis

Industrial Internet: Edge & device data synchronization with back end systems etc.

DataLake / EDW Integration for real-time Analytics: Integrating operational data with datalakes, data warehouses for analytics

AdTech: Real-time clickstream data synchronization and integration

About Aerospike

Aerospike is the global leader in next-generation, real-time NoSQL data solutions for any scale. Aerospike enterprises overcome seemingly impossible data bottlenecks to compete and win with a fraction of the infrastructure complexity and cost of legacy NoSQL databases. Aerospike's patented Hybrid Memory Architecture™ delivers an unbreakable competitive advantage by unlocking the full potential of modern hardware, delivering previously unimaginable value from vast amounts of data at the edge, to the core and in the cloud. Aerospike empowers customers to instantly fight fraud; dramatically increase shopping cart size; deploy global digital payment networks; and deliver instant, one-to-one personalization for millions of customers. Aerospike customers include Airtel, Banca d'Italia, Nielsen, PayPal, Snap, Verizon Media and Wayfair. The company is headquartered in Mountain View, Calif., with additional locations in London; Bengaluru, India; and Tel Aviv, Israel.