Aerospike Connect for Pulsar

SOLUTION BRIEF

Integrating Aerospike into your Pulsar based streaming systems

Overview

Real-time connectivity of databases and systems is critical in enterprises to support business critical use cases such as fraud detection, 360-degree customer profile, IoT, recommendation engines, etc. This requires a fast database such as Aerospike at the edge for high volume and high volume ingest and real-time data movement from the edge to the core and back. Companies with existing legacy data infrastructures also have similar requirements, in addition to integrating with their existing systems. Many enterprises are moving from their legacy messaging systems to support Pulsar, which is a cloud native messaging and event streaming platform.

Highlights

- Streams change notifications* using the new XDR protocol from Aerospike to downstream streaming applications via Pulsar

- Seamless integration between Aerospike and other enterprise systems, including legacy systems, through Pulsar

- Enables use cases that require high throughput and low latency

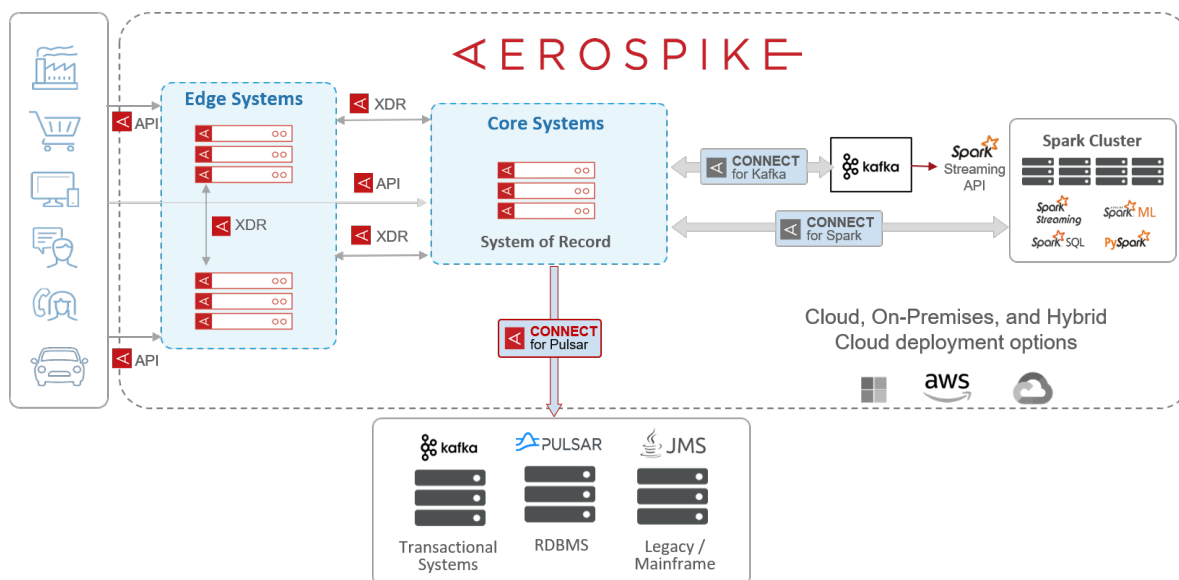*change notification notifies external systems of changes in the database via subscription

Connecting Aerospike in real-time with enterprise systems through Pulsar

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

Key features of Aerospike connect for Pulsar

- Stream change notifications from Aerospike, using the XDR protocol, to the downstream streaming applications

- Support various message formats such as Apache Avro, MessagePack, JSON and Flat JSON, making app integration easier

- Ability to route messages based on namespaces, sets, bin values, and static topic names from Aerospike to the downstream application via Pulsar

- Transform the messages going out of Aerospike to downstream applications via Pulsar

Benefits

- Enterprise-wide connectivity of Aerospike utilizing the Pulsar as a message bus

- Ability to integrate Aerospike with Pulsar sinks 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 Pulsar

- Deploy anywhere

- Drastically reduce time to insight by combining massively parallel computations in Spark with the massively parallel reads from a distributed database

Typical use cases for Aerospike connect for Pulsar

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

eCommerce and Retail / CPG: Behavior data integration, clickstream integration with product data.

Telco: Stream data form the Aerospike system that is used for high velocity and high volme 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.

The Aerospike Real-time Data Platform enables organizations to act instantly across billions of transactions while reducing server footprint by up to 80 percent. The Aerospike multi-cloud platform powers real-time applications with predictable sub-millisecond performance from terabytes to petabytes of data with five nines uptime with globally distributed, strongly consistent data. Applications built on the Aerospike Real-time Data Platform fight fraud, provide recommendations that dramatically increase shopping cart size, enable global digital payments, and deliver hyper-personalized user experiences to tens of millions of customers. Customers such as Airtel, Experian, Nielsen, PayPal, Snap, Wayfair and Yahoo rely on Aerospike as their data foundation for the future. Headquartered in Mountain View, California, the company also has offices in London, Bangalore and Tel Aviv.

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