INTEGRATING AEROSPIKE WITH OTHER ENTERPRISE SYSTEMS

**Highlights**

- Provides Real-time connectivity to Kafka
- Seamless integration between Aerospike and other enterprise systems through Kafka connectivity
- Enables event driven architecture & Microservices architecture
- Can be utilized in three ways - Inbound, Bi-Directional & Developer enabled outbound

**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**

Kafka unlike other older generation messaging systems, is purpose built for moving large datasets at high speeds. Given its highly distributed design, it is extremely suitable for high-performant data movement and it is scalable.

Aerospike is a highly scalable distributed database that forms a core building block of any Enterprise Digital Architecture. However, it is important to support free data movement between Aerospike and other enterprise systems.

Aerospike Connect for Kafka (Figure 1), member of the Aerospike Connect product portfolio, provides a simple and easy way to move data into and out of Aerospike to other enterprise systems through the Kafka enterprise messaging system.

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**Figure 1. 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.

Use cases include - ingesting data into Aerospike in real-time, move data out of Aerospike based on specific events, simultaneous writes into Aerospike and other systems through Kafka.

The Aerospike Connect for Kafka supports JMS based protocol & JSON message format, and can be used in 3 different ways:

- **Inbound only** - enables customers to primarily use it for ingesting data from Kafka into Aerospike in real-time.
- **Bi-Directional** - enables customers to ingest data into Aerospike and also get data out of Aerospike based on specific events into Kafka.
- **Developer enabled Outbound (for advanced Aerospike users)** - useful for customers who want to get data out of Aerospike into their own end-points that are not yet supported by Aerospike. This is an interface for developers to develop their own outbound connector.

Future members of the Aerospike Connect product portfolio will support other messaging systems like IBM MQ, Tibco and others.

**Benefits**

- Enterprise wide connectivity of Aerospike utilizing the Kafka messaging system in real-time
- Easier integration of edge and core databases.
- Enables event driven architecture & Microservices architecture
- Ability to integrate with any endpoint, regardless if it is directly supported by Aerospike or not

**Typical Use Cases for Aerospike Connect**

**Financial Services and FinTech:** Edge to core data movement in trading, fraud prevention

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

**Telco:** Customer data integration with real-time billing

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

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

**AdTech:** Real-time clickstream data synchronization and integration