



**KX Streaming Analytics Platform & Time-Series Database** 

STAC Live, Spring 2021. Glenn Wright, Senior Systems Architect, KX



## KX - Part of the Entire Data Lifecycle





#### What is behind our STAC-M3 results?

- A high-performance integrated streaming analytics & time-series database platform
- An in-memory compute engine
- A real-time streaming processor
- Programming language (q) and expressive SQL like query language (qSQL)



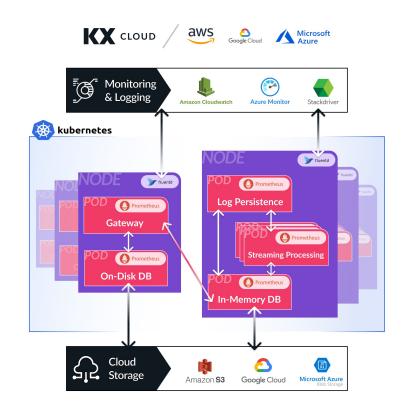
#### **Major Advantages**

- Extremely high performance vector/array based interpreted language
- Tiny footprint executable is <1MB
- Expressive and functional
- Identical queries can run on streaming data, in-memory, or on-disk (performance considerations)
- Easy to maintain database
- Code lives close to data
- Hybrid relational database with Kappa architecture



## KX Insights in the Cloud: Architecture

- Docker and Kubernetes Support OpenShift certified
- AWS, Google, Azure Marketplace
- Cloud, Hybrid, On-Premises, and Multi-Cloud support
- Object store integration (S3, Blob, Google Cloud Storage)
- REST Client/Server with embedded authentication
- Compression and Encryption at rest and in transit
- AWS Lambda support





# Ubiquity meets performance?



#### S3 Warehouse

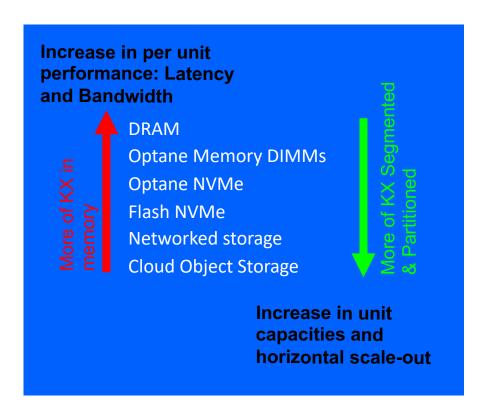
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### KX Insights: CPU, Storage and Memory Namespace become one



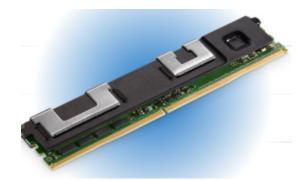
Identical queries can run on inbound streaming data, inmemory, or on-disk.

KX Insights uses namespace control to directly manage Intel Optane DIMMs as:

Storage over app direct (STAC-M3 KDB200603, KDB201109 ...)

Memory over app direct (RDB)

KX Insights directly addresses Object store key:value pairs within its internals





# Thank You

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