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OUTSMART YOUR COMPETITION WITH
INTELLIGENT FLEET MANAGEMENT

Enterprises across industries such as retail, travel and transportation, healthcare, heavy equipment, utilities, logistics, and telecommunications rely on effective fleet management for uninterrupted flow of goods and services. Leading enterprises use Kinetica for real-time fleet analytics to simultaneously ingest, enrich, explore, analyze, visualize, and act on data within milliseconds to make critical decisions, as well as find efficiencies, reduce risk, improve productivity, lower cost, generate new revenue, and improve customer experience.

US Postal Services uses Kinetica for real-time fleet management

USPS, the world's largest logistics organization, relies on Kinetica to optimize the operations of its several-hundred-thousand vehicles and employees, using visualizations and analytics of real-time data to efficiently deliver goods to the more than 154 million addresses across the United States. Kinetica merges the query needs of the traditional relational database developer with the scalability demands of the modern IoT-centric enterprise. USPS runs Kinetica as a 70TB in-memory database in a load-balanced, distributed, multi-rack environment, supporting 15,000 concurrent users and ingesting data from more than 200,000 scan devices.

KINETICA FOR INTELLIGENT FLEET MANAGEMENT

Kinetica is a GPU-accelerated, in-memory analytics database that delivers truly real-time response to queries on large, complex, and streaming data sets: 100x faster performance at 1/10 of the hardware of traditional databases. Kinetica brings together personal, proprietary, and public data from sources such as vehicles, personnel, traffic, and weather and combines it with analytic techniques such as machine learning, deep learning, and OLAP to discover rich, actionable insights. Kinetica's enterprise-grade, secure, and scalable relational database empowers enterprises to effectively manage their fleet, reduce cost, and improve profitability.

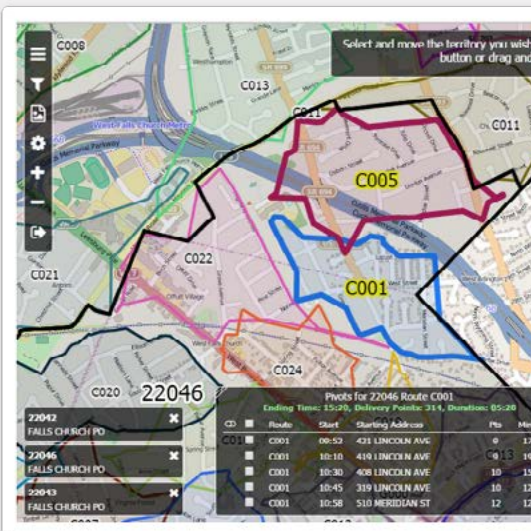### High-Performance Analytics on Fast Moving Data
Effective fleet management requires real-time analytics on fast moving data to discover and act on fresh insights. Kinetica takes advantage GPU's massive parallelization, distributed computing, and in-memory processing for real-time analytics on large, complex data to deliver actionable insights in milliseconds and enable profitable decisions. It features out-of-the-box connectors for databases, business applications, and streaming solutions such as Apache Kafka, Apache Nifi, Apache Storm, and Apache Spark to make fast-moving data immediately available for query and analytics.

Location-Based Analytics
Fleet managers need spatial awareness to locate, manage, and deploy assets. Kinetica natively manages geospatial data such as points, shapes, tracks, and labels and provides out-of-the-box geospatial functions such as filters, aggregation, and geofencing triggers to simplify location-based analytics such as drive time and distance analysis. A rich visualization framework enables interactive real-time data exploration in conjunction with the GPU-accelerated rendering of maps and accompanying dashboards.
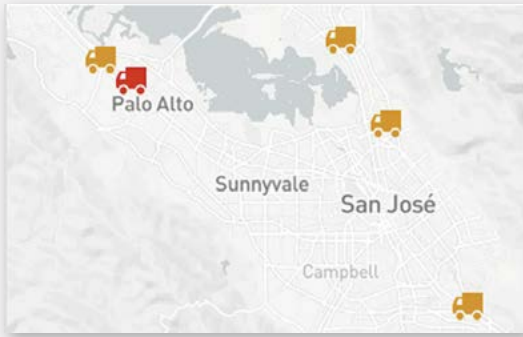
Converge AI and BI to Do More with Your Data
In order to predict demand, manage capacity, deploy assets, and reduce costs, you need fast, click-based access to sophisticated analytics such as simulations and optimizations. Kinetica's open architecture features a User-Defined Functions (UDFs) framework to extend database functionality with sophisticated analytics. You can deploy custom code and advanced machine learning libraries natively within the database as GPU-accelerated business logic to power advanced business analytics. Kinetica makes advanced algorithms available through SQL and commonly available click-based, self-service BI, and visualization tools.

Large retailer leverages Kinetica for just-in-time visibility, notification, and tracking of store deliveries

A large retailer has deployed Kinetica for logistics and transportation management and provides store managers and distribution centers with just-in-time insights to view and track deliveries targeted for stores. This retailer's 10-node Kinetica system will support over thousands of trucks delivering millions of shipments every month.
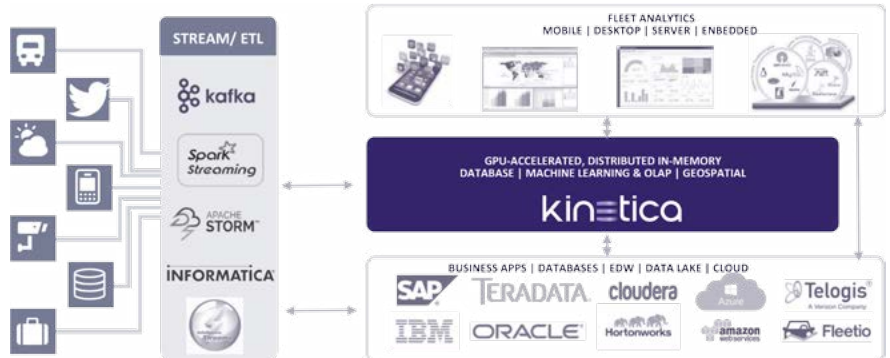

SOLUTIONS FOR INTELLIGENT FLEET MANAGEMENT

Route Optimization

Kinetica seamlessly integrates data in motion and rest from sources such as vehicles, location, sensors, personnel, weather, traffic, demand, and supply for fleet managers to effectively manage and deploy assets. You'll have point-and-click access to a wide range of analytics such as machine learning, deep learning, and OLAP to discover and act on insights in real time. These insights power data and analytics-driven fleet and personnel scheduling, route planning, rerouting, and supply chain optimization, which saves you time, reduces fuel and overtime costs, and improves customer experience.

Condition-Based Equipment Maintenance

Kinetica simultaneously ingests, analyze, and visualize real-time sensor data from assets such as aircraft, cars, trucks, and ships. It seamlessly combines the fast-moving sensor data with data at rest such as operating manuals and maintenance schedules to provide you with contextual insights into the condition of your assets. Predictive analytics can be performed on this data in real time to monitor the condition of the asset including detecting patterns, anomalies, identifying deteriorating performance, and future failures. These data-driven insights enable you to proactively maintain equipment, improve fleet productivity, and avoid costly downtime.

Just-in-Time Inventory Management

Enterprises need real-time insights into logistics and transportation systems to view and track deliveries targeted for stores. Kinetica provides real-time, customized, location-based insights into the logistics, distribution, and transportation operations for just-in-time inventory management. With Kinetica, you can better manage workforce, supply chain, inventory, reduce overstocks and spoilage, and avoid stock outs.

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For more information on Kinetica and GPU-accelerated databases, visit kinetica.com