The Katana Graph™ Intelligence platform creates competitive advantage by providing actionable insights from massive unstructured data sets, using high-performance graph algorithms. Graph adoption is accelerating at a rapid pace as graphs provide richer insights from context and connections represented in the data when compared to traditional analytics on tabular data formats. Knowledge Graphs are powering a new era of rich applications and insights never before possible in domains such as Pharma, Security, FinTech and Manufacturing.

PRODUCT OVERVIEW

Katana Graph provides a Graph Intelligence Platform offering elastic performance at massive scale for Graph Queries (contextual search), Graph Analytics (path finding, centrality and community detection), Graph Mining (pattern discovery), and Graph AI (prediction).

Katana Graph achieves best-in-class scale-up and scale-out performance by incorporating disruptive technologies like hardware acceleration (GPUs, ASICs, etc.), storage (non-volatile memory), and infrastructure (Kafka, OpenMPI, etc.) along with the ease of programmability.

VALUE PROPOSITION

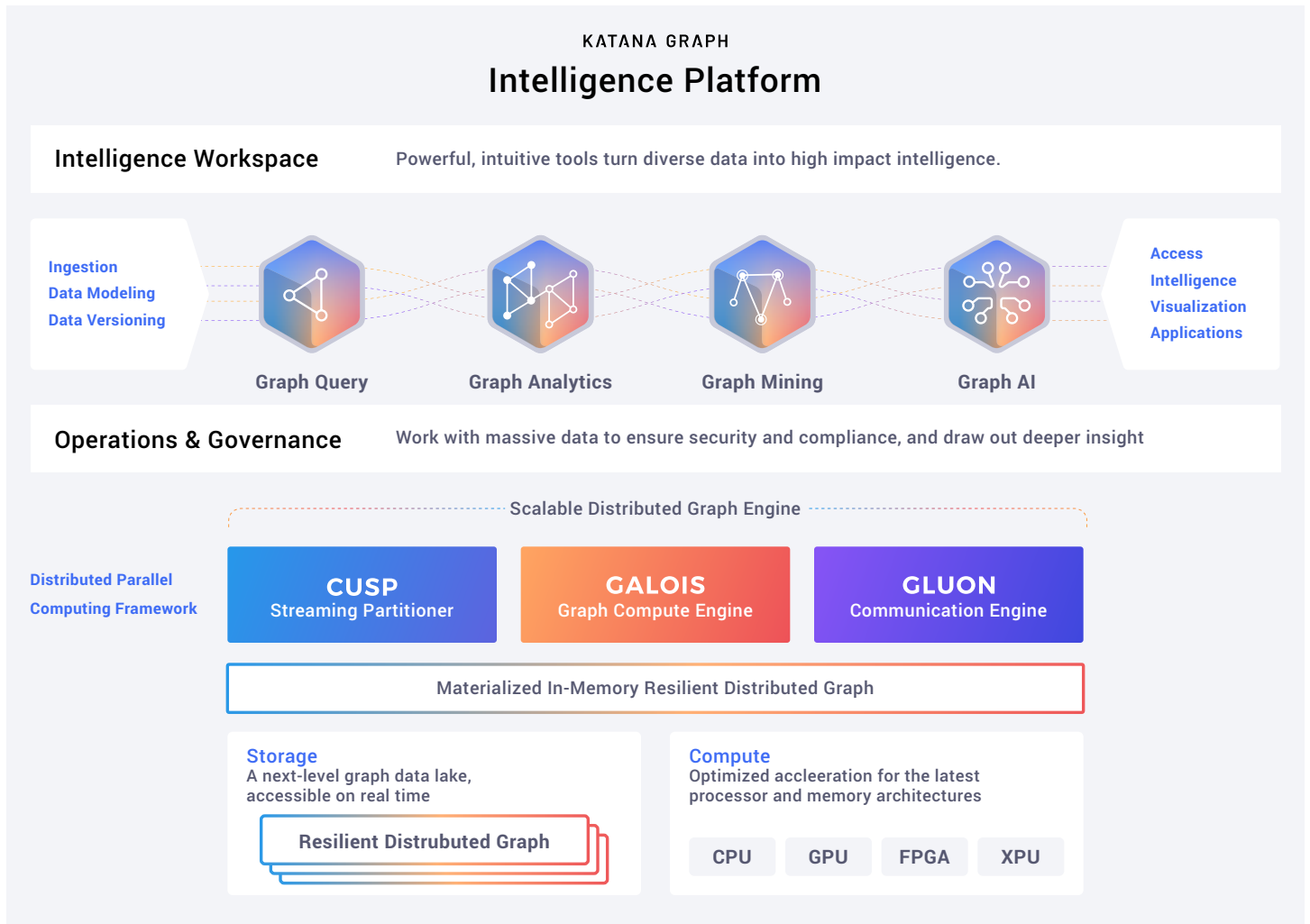|	
Performance	▪ 10 – 100x
Scale out	▪ Verfified at +256 machines ▪ (Supercomputers and Public clusters: AWS, GCP, Azure)
Programming Flexibility	▪ C/C++, Python (Analytics, Mining) ▪ OpenCypher (Query)
Hardware supported	▪ CPU ▪ GPU ▪ Optane (Byte-addressable persistent memory) ▪ Heterogenous execution and Distributed clusters (CPU and GPU)
Graph partitioning	▪ Supports custom policies (including 1D, 2D and hybrid vertex cuts) ▪ Support User specified policies ▪ Optimized partition-aware Communication layer
Memory footprint (cost saving)	▪ Support huge graph on small clusters through efficient memory footprint ▪ Allows selective loading of node and edge properties
Dataset size	▪ Designed to handle +trillion edge graphs without sacrificing performance ▪ Verified on massive graphs (WDC12: 3.5B nodes and 128B edges

TECHNOLOGY OVERVIEW

Our groundbreaking all-in-one graph intelligence platform puts unprecedented flexibility and scalability at your fingertips. Unearth deep and powerful revelations, rich veins of insights and impactful answers — with unmatched speed and accuracy.

KATANA GRAPH

Intelligence Platform

Intelligence Workspace — Powerful, intuitive tools turn diverse data into high impact intelligence.

Ingestion
Data Modeling
Data Versioning

Graph Query   Graph Analytics   Graph Mining   Graph AI

Access
Intelligence
Visualization
Applications

Operations & Governance — Work with massive data to ensure security and compliance, and draw out deeper insight

Scalable Distributed Graph Engine

Distributed Parallel
Computing Framework

CUSP Streaming Partitioner	**GALOIS** Graph Compute Engine	**GLUON** Communication Engine

Materialized In-Memory Resilient Distributed Graph

Storage
A next-level graph data lake, accessible on real time

Resilient Distrubuted Graph

Compute
Optimized accleeration for the latest processor and memory architectures

CPU   GPU   FPGA   XPU

Automated Cloud Deployments

Push-button cluster provisioning and management of cluster resources allow ease of use. Katana Graph is cloud agnostic, and works in on-prem and off-prem environments.

APPLICATIONS

Lightning-fast Graph Query – The query engine supports OpenCypher, a popular graph query language that allows users to search for complex graph patterns, update the graph and perform analytic operations like aggregations across matched portions of the graph.

Graph Analytics – An extensive library of graph analytics routines that provide global insights from graph relationships. Use cases include: Finding well-connected nodes in a graph (influencers), ranking nodes (webpages), community detection (identify clusters of similarity for fraud or segmentation), and path finding (routing).
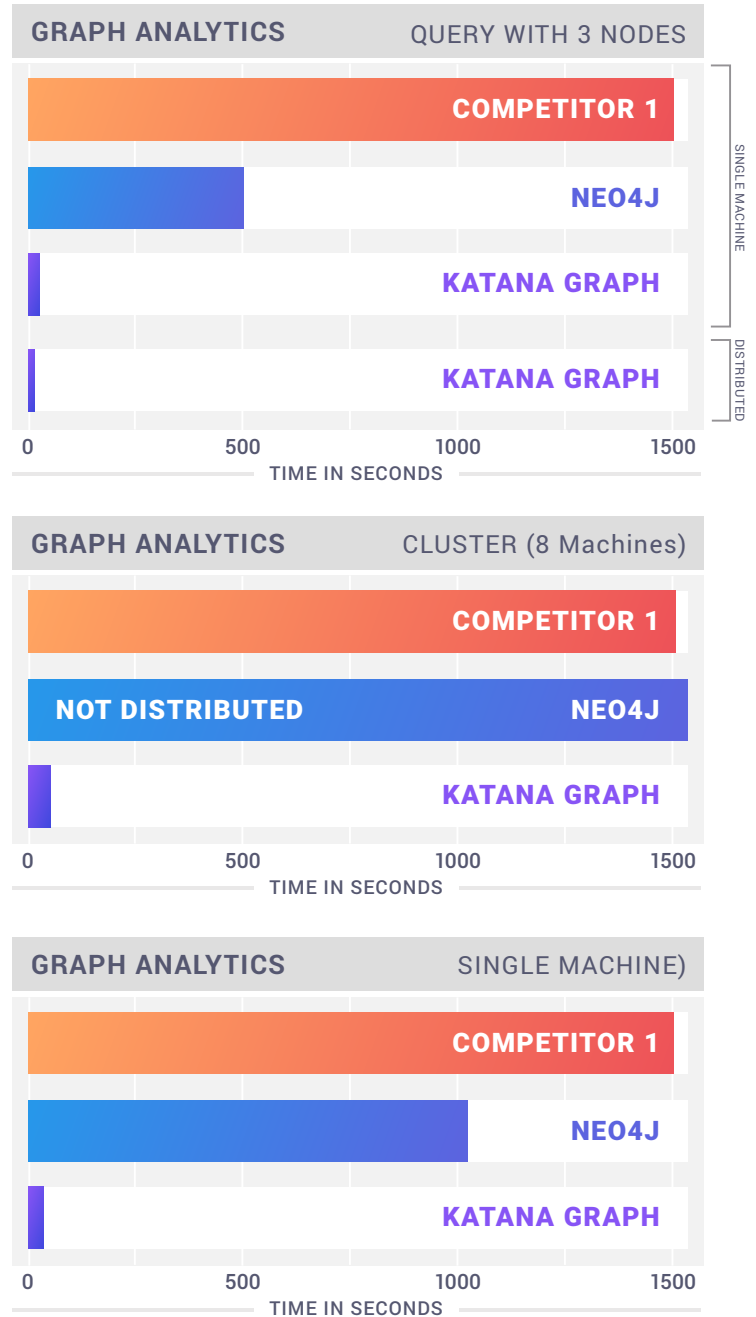
Graph Mining – Powerful library of graph mining algorithms to quickly identify explicit or implicit patterns. Applications include frequent pattern mining, k-motifs, cliques, etc.

Graph AI with Graph Neural Networks – Graph neural networks (GNN) are a new powerful approach for feature learning on graphs. Katana provides easy-to-use and scale-out packages for learning large-scale knowledge graph embeddings. Use cases include applications such as node classification, link prediction, and recommendation systems in industries like bioinformatics and cheminformatics.

PERFORMANCE HIGHLIGHTS

Katana is 10-100x faster than competing systems.

GRAPH ANALYTICS QUERY WITH 3 NODES

- COMPETITOR 1
- NEO4J
- KATANA GRAPH — SINGLE MACHINE
- KATANA GRAPH — DISTRIBUTED

0   500   1000   1500
TIME IN SECONDS

GRAPH ANALYTICS CLUSTER (8 Machines)

- COMPETITOR 1
- NOT DISTRIBUTED — NEO4J
- KATANA GRAPH

0   500   1000   1500
TIME IN SECONDS

GRAPH ANALYTICS SINGLE MACHINE)

- COMPETITOR 1
- NEO4J
- KATANA GRAPH

0   500   1000   1500
TIME IN SECONDS

Contact Katana Graph today! info@katanagraph.com