TigerGraph | AMD

SOLUTION BRIEF

ACCELERATE INSIGHTS INTO YOUR CONNECTED DATA TO BOOST BUSINESS PERFORMANCE

Improving efficiency and profitability even as tough business challenges arise is every company's goal and is essential for the world's largest companies. Fighting fraud in financial services, better understanding the retail customer journey, and solving supply chain dysfunction everywhere - graph analytics helps organizations gain insights into siloed data.

ENTERPRISES FACE UNIQUE ANALYTICS CHALLENGES

Enterprise organizations have massive amounts of data in very complex environments and a need for real-time insights. Pairing TigerGraph, the only scalable graph database, with AMD EPYC™ CPUs and AMD Xilinx FPGAs, delivers leading edge performance for advanced analytics. TigerGraph uncovers insights that would otherwise remain hidden, offering incredible ROI.

HOW DO BUSINESSES USE TIGERGRAPH?

The TigerGraph platform allows customers to perform deeper and wider analysis at scale. Blue-chip companies, innovative midsize businesses, and startups choose TigerGraph coupled with AMD to accelerate their analytics, AI, and machine learning projects with graph algorithms.

- Connecting datasets and pipelines and removing data silos
- Analyzing connected data in real-time
- Utilizing datasets for machine learning
- Automating and streamlining solution deployment and implementation
- Supporting teams with end-to-end deployment services and support as needed

Almost every industry benefits from the deep analytics TigerGraph offers.

CUSTOMER 360

UnitedHealth Group, a multinational managed healthcare and insurance company with over 50 million patients, uses TigerGraph to improve customer experience. TigerGraph creates a real-time, 360° view of its customer journey to improve attribution, engagement insights, and patient product recommendations. This improves care-path recommendations and contact center efficiency, ultimately saving UnitedHealth Group an estimated $150 million a year.

FRAUD DETECTION

Eight of the top ten global banks use TigerGraph for real-time fraud detection. A globally recognized financial institution reduced fraud false positives by 60% and avoided over $5 billion in losses by using TigerGraph.

Graph + AI Summit: AI at globally recognized financial institution

MULTIPLE USE CASES

There are many business challenges where graph analytics makes an impact, including supply chain optimization and planning, anti-money laundering, cybersecurity, energy grid management, route logistics, law enforcement, network observability, drug reaction analytics, and risk monitoring.

"The value of graph, with AI algorithms on top, is that not only can we monitor an enterprise, we can predict - and that allows us to avoid problems before they happen."

Edward Sverdlin

Vice President, Advanced Technology Collaborative, R&D, UnitedHealth Group

HOW IS TIGERGRAPH DIFFERENT?

TigerGraph's ability to perform quickly at scale gives organizations greater ability to gain power over traditional database technologies and insights from their connected data. Some differentiating factors include:

DEEPER ANALYTICS

- Integrate and de-silo your data, including virtually unlimited datasets
- Uncover hard-to-find patterns through queries that traverse 10+ hops
- Share the same master database with multiple groups while retaining local control and security

EXTREME SCALABILITY

- Analyze terabytes of data
- Automatic storage partitioning and massive parallel processing

ACCELERATED PERFORMANCE

- Achieve sub-second response times for real-time results
- Query speeds 40-300x faster than any other graph database*
- Hardware-optimized with AMD platforms

IN-DATABASE ANALYTICS + ARTIFICIAL INTELLIGENCE / MACHINE LEARNING

- Continuous graph-based feature generation and training
- Intuitive models, queries, and answers
- Relationship-powered algorithms and machine learning

THE AMD DIFFERENCE

AMD EPYC™ CPUs and AMD Xilinx™ FPGAs provide exceptional performance for running graph queries and graph algorithms.

- **AMD EPYC™ CPUs** - World's highest performing x86 server processors CPU from enterprise to cloud to HPC
  AMD EPYC™ 7003 Series Processors
- **AMD Instinct™ Accelerators** - Compute-optimized GPU architecture for leadership performance for HPC and AI
- **AMD Xilinx Alveo™, Versa™,** and **Zynq®** - Adaptive acceleration via leadership Xilinx™ FPGAs and adaptive SoCs

AMD products help accelerate evolving workloads, including AI, smart networking and software-defined infrastructure.

AMD EPYC PROCESSORS:

The broad performance and memory bandwidth of AMD EPYC™ processors allows TigerGraph users to scale to at least 10TB graphs.*

AMD XILINX ALVEO™ ACCELERATORS

With AMD Alveo™ (FPGA) acceleration TigerGraph users see between 20x to 48x the improvements in performance, allowing users to do deeper analytics on bigger data.**

SIMPLY A BETTER APPROACH

TigerGraph, powered by AMD, provides excellent insights with outstanding performance, scalability, security, and flexibility. We help organizations discover insights in highly connected data to deliver business value.

*TigerGraph Benchmark ** Reference architecture

TigerGraph

TigerGraph is the only scalable graph database for the enterprise. TigerGraph's proven technology connects data silos for deeper, wider and operational analytics at scale. Four out of the top five global banks use TigerGraph for real-time fraud detection. Over 50 million patients receive care path recommendations to assist them on their wellness journey. 300 million consumers receive personalized offers with recommendation engines powered by TigerGraph. The energy infrastructure for 1 billion people is optimized by TigerGraph for reducing power outages. TigerGraph's proven technology supports applications such as fraud detection, customer 360, MDM, IoT, AI, and machine learning.

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AMD

For more information about how AMD is enabling today and inspiring tomorrow, visit the AMD website, blog, LinkedIn and Twitter pages.