The Forrester Wave™: Graph Data Platforms, Q4 2020

The 12 Providers That Matter Most And How They Stack Up

by Noel Yuhann

November 16, 2020

Why Read This Report

In our 27-criterion evaluation of graph data platform providers, we identified the 12 most significant ones — Alibaba, Amazon Web Services, ArangoDB, Cambridge Semantics, Dgraph Labs, Franz, Microsoft, Neo4j, Ontotext, Oracle, Stardog, and TigerGraph — and researched, analyzed, and scored them. This report shows how each provider measures up and helps enterprise architecture (EA) professionals select the right one for their needs.

Key Takeaways

Neo4j, Amazon Web Services, TigerGraph Microsoft, And Oracle Lead The Pack

Forrester's research uncovered a market in which Neo4j, Amazon Web Services, TigerGraph, Microsoft, and Oracle are Leaders; Franz and ArangoDB are Strong Performers; and Dgraph Labs, Cambridge Semantics, Ontotext, Alibaba, and Stardog are Contenders.

Automation, Scalability, Advanced Query, And Search Should Factor Into Buy Decisions

As the demand for graph skyrockets, vendors must provide more automation to increase developer productivity, improve performance and scalability to support larger deployments, and enhance query and search capabilities to simplify access and accelerate connected-data use cases.

The Forrester Wave™: Graph Data Platforms, Q4 2020

The 12 Providers That Matter Most And How They Stack Up

by Noel Yuhanna
with Gene Leganza and Daniel Weber
November 16, 2020

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Related Research Documents

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Graph Data Platforms Enable Data Connections Quickly

Today's enterprises are spending too much time finding answers that require information from multiple sources. While collecting data from sources is often straightforward, enterprises struggle to connect data to create meaningful insights quickly. Solving this problem is why enterprises are adopting and implementing the new graph technology that simplifies those connections. Graph is the fastest way to connect data, especially when dealing with complex or large volumes of disparate data. Without graph, organizations have to rely on developers to write complex code that can take considerable time and effort. In some cases, it becomes impractical due to the complexity of data. Graph data platform is a new and emerging market that allows organizations to think differently and create new, intelligence-based business opportunities that would otherwise be difficult to develop and support.

Graph data platform customers should look for providers that offer:

- **A platform that simplifies end-to-end graph deployment.** Finding new insights from data is an iterative, continuous, laborious process of connecting various data sets, on-premises or in the cloud. Look for vendors with expanded automation capabilities to automate the discovery, connections, processing, analytics, and visualization of connected data to deliver an end-to-end experience to accelerate various use cases.
- **A platform that can deliver the performance and scale requirements you need.** Unlike traditional databases, graph databases are usually not large, typically ranging from hundreds of GBs to a few TBs at the most. However, it's the graph processing of billions and trillions of nodes and relationships that differentiates various solutions. Look for vendors that support comprehensive in-memory functionality, deliver scale-out across servers, and support thousands of concurrent users and queries per second. Ask the vendor for customer references when supporting more than a billion nodes and relationships.
- **A roadmap that is as bold as your graph ambitions.** Vendors continue to simplify their solutions by enabling nontechnical users to access graph data directly and make developers and designers more productive by automating app development functions. Look at vendors' roadmaps that focus on AI/machine learning (ML) automation capabilities, expand integration with various cloud software-as-a-service (SaaS) sources, enable data security by default, integrate with other data management tools and technologies, and support enhanced analytics and visualization capabilities natively.

Evaluation Summary

The Forrester Wave™ evaluation highlights Leaders, Strong Performers, Contenders, and Challengers. It's an assessment of the top vendors in the market and does not represent the entire vendor landscape. You'll find more information about this market in our reports on graph data platforms.

We intend this evaluation to be a starting point only and encourage clients to view product evaluations and adapt criteria weightings using the Excel-based vendor comparison tool (see Figure 1 and see Figure 2). Click the link at the beginning of this report on Forrester.com to download the tool.

FIGURE 1 Forrester Wave™: Graph Data Platforms, Q4 2020

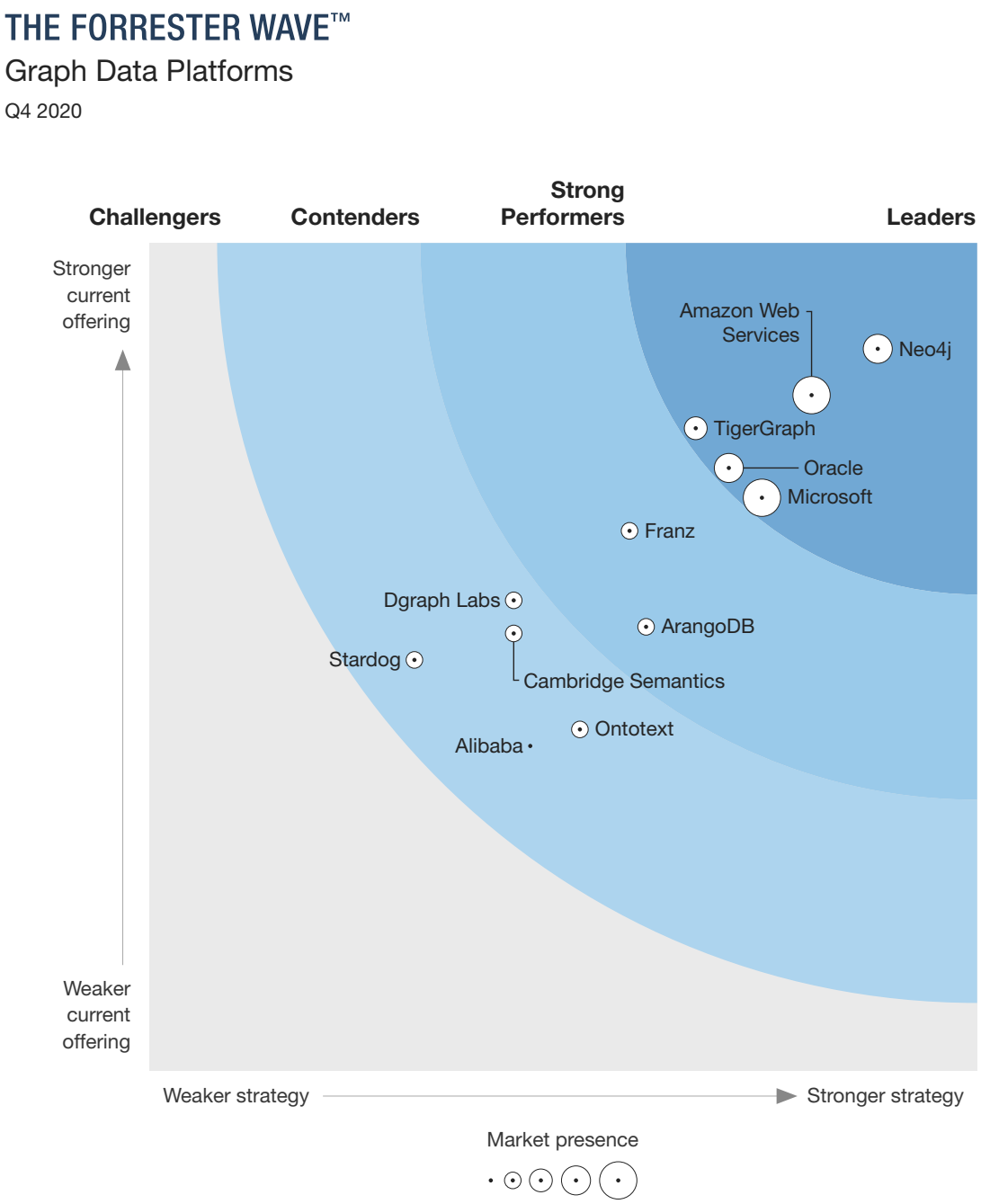

FIGURE 2 Forrester Wave™: Graph Data Platforms Scorecard, Q4 2020

	Forrester's weighting	Alibaba	Amazon Web Services	ArangoDB	Cambridge Semantics	Dgraph Labs	Franz
Current offering	50%	1.96	4.08	2.68	2.64	2.84	3.26
Graph model/engine	5%	3.00	3.00	3.00	5.00	3.00	3.00
Deployment options	5%	1.00	1.00	3.00	3.00	3.00	3.00
Cloud	5%	3.00	5.00	3.00	1.00	3.00	3.00
App development	5%	1.00	5.00	3.00	3.00	3.00	3.00
API/extensibility	5%	3.00	3.00	3.00	3.00	5.00	3.00
Data loading/ingestion	5%	1.00	5.00	1.00	5.00	3.00	5.00
Data management	4%	3.00	3.00	3.00	5.00	3.00	3.00
Transactions	5%	1.00	3.00	1.00	3.00	3.00	3.00
Queries/search	7%	1.00	5.00	5.00	3.00	5.00	3.00
Analytics	5%	3.00	3.00	3.00	3.00	3.00	3.00
Visualization	5%	1.00	3.00	1.00	3.00	3.00	5.00
High availability and disaster recovery	2%	5.00	5.00	3.00	3.00	3.00	5.00
Scalability	7%	1.00	5.00	3.00	3.00	3.00	3.00
Performance	7%	1.00	5.00	5.00	1.00	3.00	1.00
Data security	7%	3.00	3.00	1.00	1.00	1.00	3.00
Workloads	8%	1.00	5.00	1.00	3.00	3.00	5.00
Use cases	13%	3.00	5.00	3.00	1.00	1.00	3.00

All scores are based on a scale of 0 (weak) to 5 (strong).

FIGURE 2 Forrester Wave™: Graph Data Platforms Scorecard, Q4 2020 (Cont.)

	Forrester's weighting	Alibaba	Amazon Web Services	ArangoDB	Cambridge Semantics	Dgraph Labs	Franz
Strategy	50%	2.30	4.00	3.00	2.20	2.20	2.90
Strategy execution	10%	3.00	5.00	3.00	3.00	3.00	3.00
Roadmap	35%	1.00	3.00	3.00	1.00	1.00	3.00
Vision	20%	3.00	5.00	3.00	3.00	1.00	3.00
Community	15%	3.00	3.00	3.00	1.00	5.00	1.00
Support	10%	3.00	5.00	3.00	5.00	3.00	5.00
Partnerships	10%	3.00	5.00	3.00	3.00	3.00	3.00
Market presence	0%	1.00	4.30	1.70	1.90	1.10	1.80
Revenue	35%	1.00	3.00	1.00	3.00	1.00	1.00
Customers	30%	1.00	5.00	1.00	1.00	1.00	1.00
Market awareness	30%	1.00	5.00	3.00	1.00	1.00	3.00
Global presence	5%	1.00	5.00	3.00	5.00	3.00	5.00

All scores are based on a scale of 0 (weak) to 5 (strong).

FIGURE 2 Forrester Wave™: Graph Data Platforms Scorecard, Q4 2020 (Cont.)

	Forrester's weighting	Microsoft	Neo4j	Ontotext	Oracle	Stardog	TigerGraph
Current offering	50%	3.46	4.36	2.06	3.64	2.48	3.88
Graph model/engine	5%	3.00	3.00	3.00	3.00	3.00	3.00
Deployment options	5%	1.00	5.00	3.00	3.00	5.00	3.00
Cloud	5%	5.00	3.00	1.00	3.00	3.00	3.00
App development	5%	3.00	3.00	1.00	5.00	3.00	3.00
API/extensibility	5%	3.00	5.00	3.00	3.00	3.00	5.00
Data loading/ingestion	5%	3.00	5.00	3.00	5.00	3.00	5.00
Data management	4%	3.00	5.00	1.00	3.00	3.00	3.00
Transactions	5%	3.00	5.00	3.00	3.00	3.00	5.00
Queries/search	7%	3.00	5.00	3.00	3.00	3.00	5.00
Analytics	5%	3.00	3.00	3.00	5.00	1.00	3.00
Visualization	5%	3.00	3.00	3.00	3.00	1.00	3.00
High availability and disaster recovery	2%	5.00	5.00	5.00	5.00	3.00	3.00
Scalability	7%	5.00	5.00	1.00	3.00	1.00	5.00
Performance	7%	5.00	5.00	1.00	3.00	1.00	5.00
Data security	7%	5.00	3.00	3.00	5.00	1.00	3.00
Workloads	8%	3.00	5.00	1.00	5.00	3.00	5.00
Use cases	13%	3.00	5.00	1.00	3.00	3.00	3.00

All scores are based on a scale of 0 (weak) to 5 (strong).

FIGURE 2 Forrester Wave™: Graph Data Platforms Scorecard, Q4 2020 (Cont.)

	Forrester's weighting	Microsoft	Neo4j	Ontotext	Oracle	Stardog	TigerGraph
Strategy	50%	3.70	4.40	2.60	3.50	1.60	3.30
Strategy execution	10%	5.00	5.00	3.00	5.00	3.00	3.00
Roadmap	35%	3.00	5.00	3.00	3.00	1.00	3.00
Vision	20%	5.00	3.00	1.00	5.00	1.00	3.00
Community	15%	1.00	5.00	3.00	1.00	1.00	5.00
Support	10%	5.00	5.00	3.00	5.00	3.00	3.00
Partnerships	10%	5.00	3.00	3.00	3.00	3.00	3.00
Market presence	0%	5.00	3.70	1.10	3.10	1.70	2.50
Revenue	35%	5.00	3.00	1.00	3.00	1.00	3.00
Customers	30%	5.00	3.00	1.00	3.00	1.00	1.00
Market awareness	30%	5.00	5.00	1.00	3.00	3.00	3.00
Global presence	5%	5.00	5.00	3.00	5.00	3.00	5.00

All scores are based on a scale of 0 (weak) to 5 (strong).

Vendor Offerings

Forrester included 12 vendors in this assessment: Alibaba, Amazon Web Services, ArangoDB, Cambridge Semantics, Dgraph Labs, Franz, Microsoft, Neo4j, Ontotext, Oracle, Stardog, and TigerGraph (see Figure 3).

FIGURE 3 Evaluated Vendors And Product Information

Vendor	Product evaluated	Product version evaluated	Version release date
Alibaba	Alibaba Graph Database		February 2020
Amazon Web Services	Amazon Neptune	1.0.4.0	
ArangoDB	ArangoDB	3.6	January 2020
Cambridge Semantics	AnzoGraph DB	2.1.5	
Dgraph Labs	Dgraph, Slash GraphQL		September 2020
Franz	AllegroGraph	7.0	April 2020
Microsoft	Azure Cosmos DB Graph (Gremlin) API		February 2018
Neo4j	Neo4j Graph Database	4.1	June 2020
Ontotext	Ontotext Platform, GraphDB	3.2, 9.4	August 2020
Oracle	Oracle Database, Database Cloud, and Autonomous Database; OCI Marketplace Downloads — Graph Server and Client; RDF Server Big Data Spatial and Graph; Big Data Service		June 2020
Stardog	Stardog, Stardog Studio, Stardog Cloud	7	January 2020
TigerGraph	TigerGraphDB/TigerGraph Cloud	3.0	June 2020

Vendor Profiles

Our analysis uncovered the following strengths and weaknesses of individual vendors.

Leaders

- **Neo4j remains a popular graph data platform to support most use cases.** Neo4j is a property graph database platform. Neo4j Enterprise Edition includes clustering, multidata center, advanced security features, graph analytics, visual graph discovery, and exploration. Neo4j also provides Neo4j Aura, a fully managed database-as-a-service graph data platform. An open source version is available in a GPL3-licensed open source community edition. Tens of thousands of community deployments and more than 600 customers harness connected data with Neo4j to analyze and reveal how people, processes, locations, and systems are interrelated. Neo4j has been driving a multivendor initiative to develop an ISO-standard Graph Query Language (GQL) with contributions from its Cypher language and the openCypher.org community project.

  Customers like Neo4j's native storage and processing of graph data models, ACID compliance and online transaction processing (OLTP), ease to proof of concept, and autoscale capabilities. Customers often use the platform for real-time recommendations, AI, graph-based search, data science, customer 360, and master data management (MDM).

- **Amazon Web Services delivers a high-performance, fully managed graph database.** Amazon has the most variety of databases to support the needs of developers, engineers, and architects, including a graph database. Amazon Neptune is a fully managed graph database service that supports both property graph and W3C's RDF, and it leverages Apache Tinker Pop Gremlin and SPARQL, offering organizations the ability to support a broad range of use cases. Amazon Neptune has read replicas, point-in-time recovery, continuous backup to Amazon Simple Storage Service (Amazon S3), and replication across availability zones to deliver continuous availability. Amazon Neptune supports HTTPS-encrypted client connections and also allows you to encrypt databases using keys you manage through AWS Key Management Service (KMS). Amazon Neptune is in scope for ISO (9001, 27001, 27017, and 27018), HIPAA, PCI DSS 3.2.1, SOC (1, 2, and 3), ENS High, OSPAR, and HITRUST CSF compliance regimes.[1]

  Customers like the platform's ease of setup, fully managed offering, the fact it is part of the AWS ecosystem, its technical support, and performance. Top use cases include knowledge graphs, identity graphs, fraud graphs, data science, MDM, recommendation engines, and network security.

- **TigerGraph's speed and API support are helping it gain momentum.** TigerGraph is a scalable graph database that connects data silos to deliver operational analytics at scale. TigerGraph data model is based on a property graph but can also read RDF files and cover them into the property model. TigerGraph is a schema-based database; users can build graph schema models manually or use the no-code data migration tool to create graph schema automatically. TigerGraph also has a visual query builder in GraphStudio, which is a no-code tool to query the database through

drag-and-drop graph patterns. The graph platform can be extended and customized by adding user-defined functions (UDFs) written in C++. TigerGraph provides full ACID compliance and strong consistency; all updates are written to the replicas immediately.

Customers like TigerGraph's speed, language, ease of deployment, performance, visual tooling for graph schema/query, and support for both transactional and analytics use cases in the same instance. Top use cases include data science, knowledge graph, healthcare, customer 360, and fraud detection.

› **Microsoft Azure Cosmos DB with graph enables you to build all kinds of applications.** Azure Cosmos DB is Microsoft's globally distributed, multimodel database that allows users to scale compute and storage across Azure geographic regions elastically. It is a fully managed graph database that offers an elastic scale of storage and throughput, multidocument ACID transactions, automatic indexing and query, tunable consistency levels, and support for Apache TinkerPop Gremlin standards. Azure Cosmos DB provides the Gremlin API for applications that need to model, query, and traverse large graphs efficiently using Gremlin.

Customers like the platform's ease of scaling, customer support, geodistribution features, autoscale capabilities, multiple-query APIs, cost-effectiveness, and fast time-to-value. They use Azure Cosmos DB for mission-critical transactional applications, data science, knowledge graph, MDM, customer 360, and social networks.

› **Oracle's graph offering is a viable option, especially for Oracle customers.** Oracle supports both RDF and property graph models. The RDF graph is schemaless but can be implemented with automatic (direct) mapping and custom mapping (using R2RML) from a relational schema. In contrast, the property graph is schemaless but can also be implemented using schema and tables. RDF and property graphs are available on-premises, via Oracle Autonomous Database, Exadata Cloud, Exadata cloud@customer, and on public clouds (AWS, Azure, and Oracle). Oracle offers a GraphViz native graph visualization component.

Customers like Oracle's capabilities for technical support, cloud offering, PGQL, ease to start with SQL-like syntax, and performance for moderately sized deployments. Customers' top use cases for Oracle include data science, fraud detection, financial services, network monitoring, social networks, and customer 360.

Strong Performers

› **Franz's AllegroGraph offers a multimodal graph data platform for knowledge graph.** AllegroGraph is a horizontally distributed, semantic graph database developed by Franz. It employs semantic graph technologies that process data based on context, offering the ability to make data connections more intelligent. AllegroGraph operates schemaless and with ontologies as the schema. It provides a patented, in-memory federation function to support a horizontally distributed architecture. AllegroGraph can store JSON documents, non-RDF graphs, as well as RDF graphs.

AllegroGraph supports CRUD, ACID database access, and optimizations for OLTP operations. Data and metadata can be managed using Java, Python, LISP, and HTTP interfaces, and they can be queried using SPARQL and Prolog. AllegroGraph comes with social network analysis, geospatial, temporal, and reasoning capabilities.

Customers like the platform's vendor partnership, technical support, and price-to-value ratio. Top use cases include customer 360, healthcare, fraud detection, content management, knowledge graph, and MDM.

› **ArangoDB offers graph within its broader multimodel capabilities.** ArangoDB is an open source, native multimodel database. It supports key-value, document, and graph data models with a single database. It also offers AQL, a unified query language, and GraphQL, an open source data query and manipulation language for APIs. ArangoDB provides scalable queries when working with graph data. The platform can be deployed on-premises and in the cloud, including AWS, Google Cloud Platform, and Microsoft Azure. It combines the power of graphs with JSON documents, key-value store, and a text search engine to enable developers to access and integrate all data to support various applications.

Customer references like ArangoDB's graph support, flexible data model, query language, and straightforward approach. They use the platform for transactional and operational workloads, and they like its fast time-to-value for business initiatives. Customers are using it for customer 360, knowledge graph, MDM, recommendations, engines, social network analytics, AI/ML, and identity and access management.

Contenders

› **Ontotext ramps up its GraphDB features to take on the competition.** Ontotext is a Bulgarian software company best known for the GraphDB semantic graph database engine (also called RDF triplestore), which is compliant with W3C standards. GraphDB comes in different versions: free, standard edition, and enterprise edition. It allows you to link diverse data and index the data for semantic search. On top of GraphDB, the broader Ontotext Platform offers text analysis that it uses to build knowledge graphs and can be used to enrich them. The platform also offers GraphQL interfaces. Ontotext products run on-premises and in the public cloud, including AWS, Azure, and Google Cloud. GraphDB has an open source plug-in API, allowing an extension to the core engine to support other engines or algorithms. It supports full consistency in the context of a single server, while users can choose between strict and eventual consistency in a cluster mode.

Customers like GraphDB's performance, ease of use, technical support, ease of cluster deployment, advanced reasoning support, and connectors to Elasticsearch and Solr. The top customer use cases include knowledge graph, media and publishing, content and taxonomy management, healthcare, intelligence, configuration management in manufacturing, and data publishing.

› **Dgraph Labs offers a viable platform for customers.** Dgraph is a horizontally scalable and distributed GraphQL database with a graph back end. It provides ACID transactions, consistent replication, and linearizable reads. Dgraph supports GraphQL query language and responds in JSON and Protocol buffers over GRPC and HTTP. Dgraph is open source but also offers an enterprise version under a proprietary license that includes backups, advanced security offerings, cluster-to-cluster replication, and 24/7 support. Dgraph has native support for Java, JS, NodeJS, Python, Go, and C#, and the community has also built integrations with Rust, Elixir, and Dart programming languages.

Dgraph customers like the solution's ACID transactions, query language, performance, ease of data modeling, open source, liberal license, technical support, and scalability. Customers' top use cases include data center/network monitoring, data science, knowledge graph, intrusion detection, MDM, and healthcare.

› **Cambridge Semantics' AnzoGraph DB is a viable offering to support broad use cases.** AnzoGraph DB is a massively parallel processing, native graph, OLAP data warehouse database built by Cambridge Semantics. Virtual knowledge graphs are fully supported, in which remote sources of data are accessed through dynamically generated SQL push-down queries. AnzoGraph DB also powers data engineering for machine learning. It includes over 400 functions and services for regular line-of-business analytics, including views and windowed aggregates, geospatial functions, and graph, as well as data science algorithms to support in-graph feature engineering. The company delivers products and solutions that enable IT departments and business users across life sciences, financial services, government, manufacturing, and other industries to accelerate data delivery and provide meaningful insights using graph technology. AnzoGraph DB supports both open W3C SPARQL 1.1/RDF standards and RDF* (aka RDF star) property graphs, and soon it will support OpenCypher on the same data. We did not evaluate the broader Anzo Enterprise Data Fabric Knowledge Graph platform but only the standalone AnzoGraph DB product.

Customers like AnzoGraph DB's ease of ingesting and transforming different types of data into graph, its scale, its integration with structured and unstructured data, its interoperability, and the organization of the data layers to map data from the sources to the knowledge graph. Top use cases include embedded analytics that require graph algorithms, data science, knowledge graph, and MDM.

› **Alibaba joins the bandwagon to support graph delivering a credible offering.** Alibaba offers a broad range of infrastructure, platform, and database services, similar to Amazon, Google, and Microsoft. While Alibaba has some large and complex graph data deployments across various industries, most are limited to China. Alibaba offers a fully managed graph data platform that is a recent addition to its broad database offerings, which comprise relational and nonrelational databases. Key capabilities for Alibaba's graph data platform include support for both Gremlin and Cypher, ACID features, high availability and disaster recovery, schema-free and autoindexing, translytical capabilities, and integration with the broader ecosystem to support data ingestion, integration, and synchronization.

Customer references like Alibaba's performance, ease of use, simple deployment, interface expandability, and security features. Top use cases include knowledge graph and fraud detection.

› **Stardog offers good data virtualization capabilities to support graph platforms.** Stardog is an enterprise knowledge graph platform that helps create a flexible, reusable data layer for answering complex queries across data silos. The Stardog platform is built on the RDF open standards, supporting RDF and labeled property graphs. Stardog can be deployed on-premises or in the public cloud, including AWS and Azure. Stardog Studio is a feature-rich integrated development environment for Stardog. Within Stardog Studio, some hubs help users write queries, explore data, visualize data, connect virtual graphs, and load data. The platform natively supports SPARQL, SWRL, SHACL, GraphSQL, SQL through business intelligence (BI)/SQL connectors, Java, JavaScript, Python, .NET, Clojure, Spring, and Groovy. While Stardog does not offer a full-featured low-code development environment, it has partnered with Zudy and metaphactory to provide this feature.

Stardog customers like the platform's good variety of connectors for data virtualization, APIs and BI connectivity, ease of use, virtual graphs, and visualization capabilities. The top use cases are knowledge graph, MDM, data science, and financial services.

Evaluation Overview

We evaluated vendors against 27 criteria, which we grouped into three high-level categories:

› **Current offering.** Each vendor's position on the vertical axis of the Forrester Wave graphic indicates the strength of its current offering. Key criteria for these solutions are data connectivity, data pipeline, data discovery, data preparation, data catalog, data lineage, data security, data governance, data processing and persistence, data transformation, data quality, data integration, data access and search, data fabric deployment, data fabric management, performance and scale, data fabric integrated solution, and use cases.

› **Strategy.** Placement on the horizontal axis indicates the strength of the vendors' strategies. We evaluated the roadmap, vision, strategy execution, and professional services and support.

› **Market presence.** Represented by the size of the markers on the graphic, our market presence scores reflect each vendor's revenue, customer base, and solution awareness.

Vendor Inclusion Criteria

Forrester included 12 vendors in the assessment: Alibaba, Amazon Web Services, ArangoDB, Cambridge Semantics, Dgraph Labs, Franz, Microsoft, Neo4j, Ontotext, Oracle, Stardog, and TigerGraph. Each of these vendors has:

- **An enterprise-class graph data platform offering.** Vendors must offer the following core graph data platform functional components, tools, and features: 1) support for property graph and RDF, including full support for high availability, security, data access, performance, backup, recovery, scalability, and management; 2) data logging for persistence; 3) data integrity and consistency; 4) native tools or integration with third-party vendors to support loading, unloading, administration, security, integration, data quality, and other data management functions; 5) support for queries, data workloads, and access patterns; 6) the ability to be deployed on-premises or in the cloud, or both; 7) data access using standard graph query engines such as Cypher, Gremlin, or SparQL for RDF; and 8) the ability for customers to build various kind of applications, insights, and other systems.
- **A standalone graph data platform.** We included only products that are not technologically tied to any particular applications (such as packaged applications, SaaS offerings) or specific BI, business performance solution; predictive analytics, ETL or middleware stack and that do not require embedding in other applications.[2] Products must be supported in a standalone environment to support various kinds of workloads.
- **A publicly available release.** Each participating vendor must actively market an enterprise graph database, platform, or similar solution. The product or cloud service version included in the evaluation must have been generally available either as software or cloud service as of July 1, 2020.
- **A referenceable install base.** At least 25 enterprise customers use the vendor's graph data platform product or service.
- **Customer interest.** Forrester included only vendors that customers mentioned several times during Forrester inquiry calls in the past 12 months related to graph data platforms or related topics.
- **Client inquiries and technologies that put the vendor on Forrester's radar.** Forrester clients often discuss the vendors and products through inquiries and interviews; alternatively, the vendor may, in Forrester's judgment, warrant inclusion or exclusion in this evaluation because of technology trends and market presence.

Supplemental Material

Online Resource

We publish all our Forrester Wave scores and weightings in an Excel file that provides detailed product evaluations and customizable rankings; download this tool by clicking the link at the beginning of this report on Forrester.com. We intend these scores and default weightings to serve only as a starting point and encourage readers to adapt the weightings to fit their individual needs.

The Forrester Wave Methodology

A Forrester Wave is a guide for buyers considering their purchasing options in a technology marketplace. To offer an equitable process for all participants, Forrester follows The Forrester Wave™ Methodology Guide to evaluate participating vendors.

In our review, we conduct primary research to develop a list of vendors to consider for the evaluation. From that initial pool of vendors, we narrow our final list based on the inclusion criteria. We then gather details of product and strategy through a detailed questionnaire, demos/briefings, and customer reference surveys/interviews. We use those inputs, along with the analyst's experience and expertise in the marketplace, to score vendors, using a relative rating system that compares each vendor against the others in the evaluation.

We include the Forrester Wave publishing date (quarter and year) clearly in the title of each Forrester Wave report. We evaluated the vendors participating in this Forrester Wave using materials they provided to us by August 8, 2020, and did not allow additional information after that point. We encourage readers to evaluate how the market and vendor offerings change over time.

In accordance with The Forrester Wave™ Vendor Review Policy, Forrester asks vendors to review our findings prior to publishing to check for accuracy. Vendors marked as nonparticipating vendors in the Forrester Wave graphic met our defined inclusion criteria but declined to participate in or contributed only partially to the evaluation. We score these vendors in accordance with The Forrester Wave™ And The Forrester New Wave™ Nonparticipating And Incomplete Participation Vendor Policy and publish their positioning along with those of the participating vendors.

Integrity Policy

We conduct all our research, including Forrester Wave evaluations, in accordance with the Integrity Policy posted on our website.

Endnotes

[1] HIPAA: Health Insurance Portability and Accountability Act.

[2] ETL: extract, transform, load.

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