

The Forrester Wave™: Multimodel Data Platforms, Q3 2021

The 15 Providers That Matter Most And How They Stack Up

by Noel Yuhanna

July 15, 2021

Why Read This Report

In our 26-criterion evaluation of multimodel data platform providers, we identified the 15 most significant ones — ArangoDB, Couchbase, DataStax, EDB, IBM, InterSystems, MariaDB, MarkLogic, Microsoft, MongoDB, Neo4j, Oracle, Redis Labs, SAP, and SingleStore — and researched, analyzed, and scored them. This report shows how each provider measures up and helps enterprise architecture professionals select the right one for their needs.

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by Noel Yuhanna
with Gene Leganza and Robert Perdoni
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Multimodel Data Platforms Accelerate Deployment Of New Apps And Insights

Segregating data based on data types and models often slows down data access and leads to data and administration challenges. Multimodel data platforms represent the intersection of multiple data models such as document, graph, and relational in a single data platform, offering speed, scale, performance, integration, and security over the polyglot persistence model. Combining multimodel data types and models on large-scale memory helps deliver real-time, consistent, and trusted data to support new business requirements. Most organizations leverage multimodel data platforms to support microservices-based applications and a common data platform for customer 360, fraud detection, internet-of-things (IoT) analytics, and highly interactive edge applications.

As a result of these trends, multimodel data platforms customers should look for providers that:

- **A platform that delivers built-in speed, scale, and security to meet your requirements.** Multimodel data platforms need to provide low latency access to critical data in various data formats to meet demands for applications and insights. In addition, they need to support encryption, data masking, auditing, keys management, and real-time data protection built into the platform. Look for vendors that support distributed in-memory functionality, scale-out architecture, data tiering across SSD/flash/DRAM, persistent memory, and a high degree of concurrency and low-latency access to data. Ask the vendor for customer references when supporting large and complex multimodel databases beyond 50 terabytes in size.
- **A platform that can support multimodel apps and insights quickly through automation.** A multimodel data platform gives developers and data engineers the breadth and depth of tooling needed to rapidly work through a common data platform to support various applications and insights. Look for solutions that deliver native automation capabilities, including AI/machine learning (ML) to support zero administration for query and process tuning, data platform optimization, fast and seamless backup and recovery, and zero-downtime upgrade and patching, with the facility to override if needed.

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- **A roadmap that is as bold as your multimodel ambitions.** Vendors simplify their solutions by automating the data ingestion, integration, storage, processing, and access to make developers and data engineers highly productive. Look at vendors' roadmaps that focus on AI/ML automation capabilities, expanded integration with new data sources, enablement of data security by default, integration with other data management tools and technologies, and support for broad API capabilities.

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 [multimodel data platforms](#).

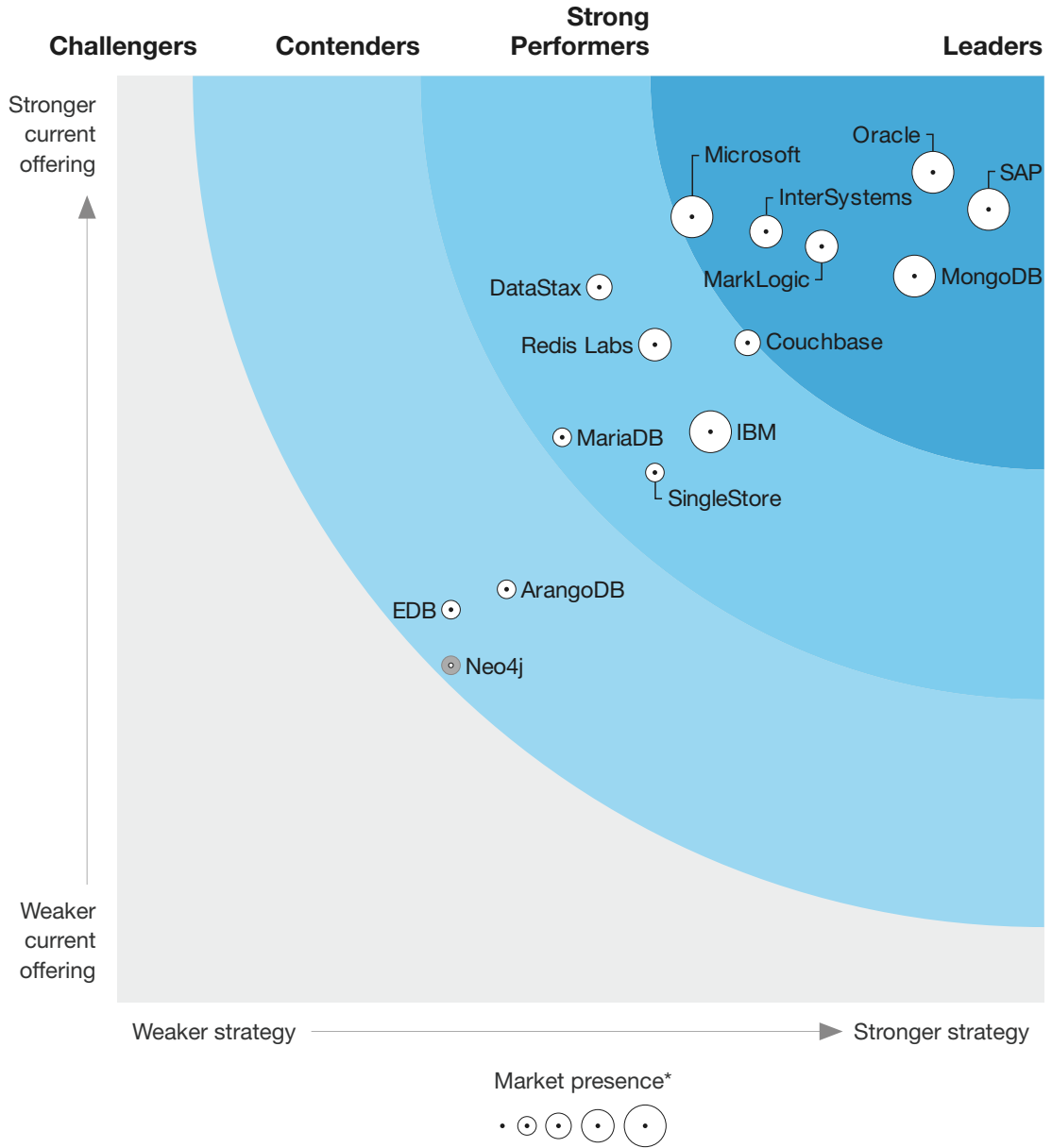
We intend this evaluation to be a starting point only and encourage clients to view product evaluations and adapt criteria weightings using the Excel-based vendor comparison tool (see Figure 1 and see Figure 2). Click the link at the beginning of this report on Forrester.com to download the tool.

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FIGURE 1 Forrester Wave™: Multimodel Data Platforms, Q3 2021

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FIGURE 2 Forrester Wave™: Multimodel Data Platforms Scorecard, Q3 2021

	Forrester's weighting	ArangoDB	Couchbase	DataStax	EDB	IBM	InterSystems	MariaDB	MarkLogic	Microsoft	MongoDB
Current offering	50%	2.23	3.56	3.86	2.12	3.08	4.16	3.05	4.08	4.24	3.92
Development	50%	2.66	2.72	3.32	2.44	3.16	3.52	2.90	3.96	4.08	4.04
Deployment	50%	1.80	4.40	4.40	1.80	3.00	4.80	3.20	4.20	4.40	3.80
Strategy	50%	2.10	3.40	2.60	1.80	3.20	3.50	2.40	3.80	3.10	4.30
Roadmap	30%	1.00	3.00	1.00	1.00	3.00	3.00	3.00	5.00	3.00	3.00
Vision	35%	3.00	3.00	3.00	1.00	3.00	3.00	1.00	3.00	3.00	5.00
Strategy execution	20%	1.00	5.00	3.00	3.00	3.00	5.00	3.00	3.00	3.00	5.00
Technical support	10%	5.00	3.00	5.00	5.00	5.00	5.00	5.00	5.00	3.00	5.00
Professional services	5%	1.00	3.00	3.00	1.00	3.00	1.00	1.00	3.00	5.00	3.00
Market presence	0%	1.60	2.40	2.35	1.95	4.25	4.00	1.80	3.05	5.00	4.30
Product revenue	35%	1.00	2.00	2.00	1.00	4.00	5.00	1.00	2.00	5.00	4.00
Install base	30%	1.00	2.00	2.00	3.00	5.00	5.00	3.00	4.00	5.00	5.00
Market awareness	20%	4.00	4.00	3.00	2.00	3.00	3.00	2.00	5.00	5.00	4.00
Partnerships	15%	1.00	2.00	3.00	2.00	5.00	1.00	1.00	1.00	5.00	4.00

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

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FIGURE 2 Forrester Wave™: Multimodel Data Platforms Scorecard, Q3 2021 (Cont.)

	Forrester's weighting	Neo4j*	Oracle	Redis Labs	SAP	SingleStore
Current offering	50%	1.82	4.48	3.55	4.28	2.86
Development	50%	1.84	4.56	3.30	4.16	2.92
Deployment	50%	1.80	4.40	3.80	4.40	2.80
Strategy	50%	1.80	4.40	2.90	4.70	2.90
Roadmap	30%	3.00	5.00	3.00	5.00	3.00
Vision	35%	1.00	5.00	3.00	5.00	3.00
Strategy execution	20%	1.00	3.00	3.00	5.00	3.00
Technical support	10%	3.00	3.00	3.00	3.00	3.00
Professional services	5%	1.00	5.00	1.00	3.00	1.00
Market presence	0%	1.60	4.60	3.10	4.80	1.20
Product revenue	35%	1.00	5.00	2.00	5.00	1.00
Install base	30%	2.00	5.00	5.00	5.00	1.00
Market awareness	20%	1.00	3.00	3.00	4.00	2.00
Partnerships	15%	3.00	5.00	2.00	5.00	1.00

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

*Indicates a nonparticipating vendor

Vendor Offerings

Forrester included 15 vendors in this assessment: ArangoDB, Couchbase, DataStax, EDB, IBM, InterSystems, MariaDB, MarkLogic, Microsoft, MongoDB, Neo4j, Oracle, Redis Labs, SAP, and SingleStore (see Figure 3).

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FIGURE 3 Evaluated Vendors And Product Information

Vendor	Product evaluated	Product version evaluated
ArangoDB	ArangoDB	
Couchbase	Couchbase Server	6.6
DataStax	DataStax Enterprise; DataStax Astra	DataStax Enterprise 6.8
EDB	EDB Postgres Advanced Server	13
IBM	IBM Cloud Pak for Data with Db2 Cartridge	3.5 (Cloud Pak for Data), 11.5.5 (Db2 Cartridge)
InterSystems	InterSystems IRIS Data Platform	2020.4
MariaDB	MariaDB Platform	X5
MarkLogic	MarkLogic Server	10.0-6.2
Microsoft	Azure Cosmos DB	
MongoDB	MongoDB Enterprise Advanced; MongoDB Atlas	4.4
Neo4j	Neo4j	
Oracle	Oracle Database	21c
Redis Labs	Redis Enterprise	6.0.12
SAP	SAP HANA; SAP HANA Cloud	2.0 SPS 5
SingleStore	SingleStore DB	7.3

Vendor Profiles

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

Leaders

- SAP leverages a mature in-memory platform to support any multimodel workload.** SAP HANA supports multiple data models — relational, graph, document, spatial, and text — leveraging its mature, distributed in-memory technology. Developers can use a host of multimodel programming languages, including Python, Go, Node.js, Ruby, and .NET, along with low-code RAD by Mendix through its partnership. Customers use SAP HANA to support various use cases, including edge, big data, customer analytics, transactional apps, and real-time analytics.

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SAP has a solid vision that focuses on the distributed SAP HANA multimodel data platform for unified data and analytics for any cloud, supporting all data and all workloads and leveraging advanced AI/ML and self-service capabilities. The solution has outstanding support for transactions, queries, analytics, and search across hybrid and multicloud environments, supporting transactional, operational, and analytical workloads. However, it lags in administration automation, fully automated migration from on-premises to cloud, and limited consulting services for multimodel deployments. Nevertheless, reference customers spoke highly about the performance, versatility, all-in-one integrated development environment, and platform flexibility. SAP is a good fit for applications that need high-performance, low-latency access to multimodel data to support various workloads.

- **Oracle is a popular relational database with great multimodel capabilities.** Oracle supports graph, document, key-value, geospatial, temporal, object, and multidimensional data in a single data platform. Developers can access multimodel data using SQL, REST, and APIs, as well as built-in low-code (APEX), developer (SQL Developer), and modeling (SQL Modeler) tools. Oracle Database also includes tools such as Graph Studio, Spatial Studio, AutoML, and ML Notebooks to simplify multimodel development and analysis. Customers use Oracle for various use cases, including IoT, big data, customer 360, fraud detection, real-time analytics, and social, transactional, and operational applications.

Oracle's vision focuses on delivering an integrated platform to support all use cases and workloads for deployment in on-premises, cloud, or hybrid cloud environments. The solution has outstanding administration capabilities to support a hybrid cloud, autonomous capabilities to automate query and transaction optimization, and simplified data loading, transformation, and insights. Oracle also offers good consulting services to help with deployments. Reference customers called out Oracle's broad multimodel features: "Overall, the solution has worked well for the company," and "[the solution is] robust and able to support our critical business functions." However, some reference customers claim that more comprehensive tooling is needed to support large and complex multimodel deployments. Oracle is a good fit for hybrid cloud environments that need to support transactional, operational, and analytical workloads.

- **MongoDB is a one-stop shop for multicloud multimodel deployments.** MongoDB's flexible document model is a superset of data models that allows for representing other data models, including relational/tabular, key-value, graph nodes and edges, time-series, geospatial, and text. In addition, built-in services for other workloads include Atlas Data Lake, Atlas Search, and MongoDB Realm for mobile and sync. Customers use MongoDB's data platform for many use cases, including IoT, fraud detection, mobile, big data, real-time analytics, customer analytics, and e-commerce.

MongoDB's vision focuses on automating and accelerating building applications on a multimodel data platform to support various business use cases. It scored exceptionally well in search, streaming, analytics, app development, administration, and technical support. One large reference

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customer confirmed MongoDB's broad features capability: "Overall, we have been very satisfied with the deployment, and there is plenty of scope for our organization to realize even more value from the range of features it offers." However, MongoDB's partner ecosystem is still evolving to support multimodel, and some reference customers have raised concerns about its licensing model. MongoDB is a great fit when looking to extend a document database to support multimodel use cases and support multicloud, multimodel deployments.

- **MarkLogic tackles complex use cases easily with its scalable platform.** MarkLogic is a long-standing leader of multimodel data platforms offering support for various data models, including XML, JSON, text, geospatial, and RDF. It provides a tightly integrated all-in-one platform that works as a triple-store, key-value store, and document database, besides supporting native search capabilities. The mature multimodel data platform can handle a broad spectrum of use cases, including IoT, big data, fraud detection, real-time analytics, edge, and content management.

MarkLogic has a solid vision that focuses on hybrid-cloud services, self-automation, AI/ML, and distributed data hubs. The solution offers outstanding scalability, technical support, analytics, search, data security, and reliability. One reference customer also confirmed MarkLogic's robust platform and said that "product releases are solid," "easy to deploy," and "greatly simplify our architecture." However, the platform lags in persona-based tooling, consulting services, partner ecosystem, and comprehensive migration tooling from on-premises to the cloud. MarkLogic is a great choice for companies that don't mind paying a premium to support large and complex multimodel deployments.

- **InterSystems is a high-performance platform with great support and reliability.** InterSystems' IRIS data platform supports relational, object, document, key-value, cubes, and multidimensional array, but it does not have native graph capabilities. The platform eliminates the need to integrate multiple technologies, resulting in less code, fewer system resources, and less maintenance. Customers use it to support customer analytics, IoT, AI/ML-enabled apps, risk analytics, and vertical-specific use cases such as healthcare apps and insights.

InterSystems' vision focuses on a unified platform to support various applications and insights. The solution scored well in performance, analytics, search, and transactions. Reference customers have been delighted with InterSystems; one said, "Their customer support is always super," and another said they had been "using it in a mission-critical application for over 10 years and are overall happy with performance and features and reliability." However, most find InterSystems' platform to be expensive, and finding skills can be challenging. In addition, it lags in comprehensive multimodel tooling, including migration tooling to support simplified migrations from on-premises to the cloud. A reference customer confirmed the cost issue and said that "cost is relatively high." Nevertheless, InterSystems is a good fit for large companies looking for high-performance multimodel workloads with graph requirements.

- **Microsoft supports multimodel use cases at Azure scale.** Microsoft Azure Cosmos DB is a fully managed NoSQL database that supports key-value, graph, document, and columnar data models, which can be accessed using APIs. It also supports no-code/low-code app development

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with native integration with Azure Logic Apps, Microsoft Power Automate, and Azure Functions. Customers use Cosmos DB to support IoT, mobile, big data, customer 360, fraud detection, gaming, and transactional and operational workloads.

Microsoft's vision focuses on extending Cosmos DB to integrate with other Azure services, improve automation, and support global deployments. Cosmos DB has excellent business value and scored well in streaming, analytics, high availability and disaster recovery (HA/DR), automation, search, query, and data access capabilities. However, it lags in comprehensive multimodel tooling, technical support, migration tooling from on-premises to the cloud, and other competitive products. A reference customer also confirmed the gap in support and said Microsoft "needs to improve support," primarily to support large and complex deployments. Cosmos DB is a good fit for enterprises that want native and tighter integration with the Azure Cloud to support moderate to large multimodel use cases.

Strong Performers

- **Couchbase focuses on cloud-to-edge but lags in automation and tooling.** Couchbase is an open source, cloud-native, distributed, and integrated multimodel NoSQL database that supports key-value, document, text, search, and spatial data models, which can be accessed through APIs and SQL-compatible query language, but the platform lacks native graph storage. Couchbase has broad multimodel capabilities, including full-text search, data access, distributed transactions, and a single pane of glass to manage data across multiple clouds. Customers often use Couchbase to support various workloads, including customer 360, social networking, IoT, mobile, and transactional and operational workloads.

Couchbase's vision is to deliver a modern database that enables enterprises to distribute data across both public and private clouds and extend it to the edge. However, customers see a lack of comprehensive consulting to support enterprisewide multimodel deployments. Reference customers also confirmed this and said it's "hard to develop," the "full-text search solution is not mature," and there is "limited out-of-the-box monitoring." Couchbase has a good flexible multimodel architecture, good HA/DR capabilities, an SQL query language that simplifies access to complex data, and support for edge applications. However, it lags in automation and tooling to support complex deployments, data security, and overall price/performance. Couchbase is a good fit when supporting edge applications and mixed workloads that span geodistributed regions.

- **DataStax has good distributed capabilities but lags in tools and maturity.** DataStax is built on Apache Cassandra, Apache Pulsar streaming, and the Stargate open source API platform and supports multiple data models, including tabular/relational, key-value, graph, wide columns, and document. Developers can access data through various query languages, including CQL, SQL, Solr, Gremlin, and APIs. Customers use the solution to support many use cases, including microservices apps, search, customer 360, IoT, big data, fraud detection, social networking, and operational workloads.

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DataStax's vision focuses on a distributed multimodel data platform, improving automation and developer productivity, and supporting a broad spectrum of emerging business use cases. Its strategic weakness includes an incremental roadmap, lack of aggressive rollout of cutting-edge innovative features, and overall partner ecosystem to support multimodel deployments. The solution scored well in scalability, technical support, HA/DR, distributed data processing, and support for multiple workloads. However, it's not easy to build applications, analytics and search capabilities have gaps, and migrations from on-premises to the cloud can be challenging. Reference customers said that the solution lags in comprehensive "management tools" to support multimodel, has performance issues when dealing with "high write throughput," and requires "more CPUs to support more indexes." Overall, DataStax is a good fit for companies dealing with large amounts of distributed data to support multimodel operational use cases.

- **Redis Labs delivers high performance but lacks services for complex deployments.** Redis is a multimodel, open source data platform supporting multiple built-in data structures, document, graph, time-series, and object data models to build modern applications and insights. In addition, RedisGears, a programmability engine for Redis supporting Python, Java, C, and JavaScript, can program any functionality across data models. Customers leverage Redis Enterprise (the commercial version by Redis Labs) to support high-speed transactions, fraud detection, recommendation engines, customer 360, machine learning, IoT, search, real-time analytics, and e-commerce.

Redis Labs' vision focuses on real-time data, anywhere at any scale. Its strategic weakness includes a lack of a broad partner ecosystem and consulting services to support large and complex development and deployment. It scored well in performance, ease of administration, diverse use cases, transactions, queries, and data access. However, it lags in advanced data security, analytics, streaming/loading, application development, and multimodel tooling. A reference customer called out concerns with support, while another said the "licensing cost is very high for open source software." Overall, Redis is a good fit when applications demand low-latency, high-performance access to multimodel data.

- **IBM extends Db2 to support multimodel but lags in high-end scale and tooling.** IBM Db2 supports multiple data models, including XML, JSON, BSON, graph, and relational, which developers can access using SQL and APIs. The data platform also includes automated AI features for no-code model creation and training. Companies use Db2 to support various use cases, including IoT, mobile, big data, fraud detection, real-time analytics, and operational reporting.

IBM's vision focuses on delivering an integrated multimodel Db2 that leverages AI, self-service, and automation capabilities. Its strategic weaknesses include its slow pace in rolling out innovative features for multimodel and a lack of comprehensive consulting services for multimodel. IBM has good transactional capabilities, an abundance of Db2 skills, and integration of Db2 with other data management functions to support broader use cases. Customers like the platform's minimal data movement requirements and general data security features. However, it lags in native tooling to

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fully exploit multimodel data, its HA/DR requires effort, and it has rudimentary built-in analytics capabilities. IBM is a good fit for organizations that want to extend the relational database to support multimodel in a hybrid and multicloud environment.

- **SingleStore offers a good multimodel platform that is less mature.** SingleStore supports diverse data models, including relational, key-value, document, time-series, geospatial, and unstructured text, but it lacks native graph capabilities. Data can be accessed using ODBC and JDBC and hundreds of programming languages such as C/C#, Java, and Python through its MySQL wire-protocol compatibility. Customers use the solution to support various use cases, including IoT, mobile, big data, fraud detection, real-time analytics, gaming, and operational reporting.

SingleStore's vision focuses on a unified data platform for fast analytics on any data across cloud and on-premises. It lacks a broad partner ecosystem and consulting services to help with complex multimodel deployments. SingleStore has good query and access capabilities and drop-in replacement capability for MySQL and MariaDB. However, it lags in product maturity, multimodel tooling, administration, scalability, app development, and migration tooling. A reference customer confirmed product issues and said that the vendor's "primary focus over the next year needs to be addressing minor issues and hiccups related to operations, upgrades, and patches." Nevertheless, SingleStore is a good fit when looking to support multimodel capabilities with relational databases for moderately sized applications.

- **MariaDB offers a viable open source multimodel but lags in tooling/consulting services.** MariaDB is a community-developed, commercially supported fork of MySQL under the GNU license. It supports relational, columnar, geospatial, JSON, and graph, which can be accessed by various programming languages such as C/C++, Java, and .NET. MariaDB maintains high compatibility with MySQL and is developing new features to extend the platform. Customers use MariaDB to support various workloads, including customer 360, customer analytics, and operational reporting.

MariaDB's vision focuses on supporting any workload running on any cloud at any scale. Its strategic weaknesses include an incremental roadmap, lack of a broad partner ecosystem, and lack of consulting services to help with multimodel deployments. It scored well in transactions, queries, data access, and technical support categories and offers an attractive price/performance. However, some earlier product instability issues have been addressed, and lags in advanced data security, data modeling, and consulting services support enterprise-grade multimodel deployments. MariaDB is a good fit for companies looking for an open source multimodel platform with good transactional support.

Contenders

- **ArangoDB is a viable low-cost platform but lags in enterprise scale.** ArangoDB is known for its open source, native multimodel platform that supports document (JSON), graph, and key-value in one database with a single declarative query language. ArangoDB focuses on all deployment types,

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including on-premises, public cloud, multicloud, private cloud, hybrid cloud, embedded within an application, and dedicated database as a service (DBaaS). Customers leverage ArangoDB for many use cases, including microservices, customer 360, fraud detection, transactional workloads, and data services.

ArangoDB's vision focuses on a geodistributed architecture, multipersona tooling, and improved automation to simplify deployments. Its strategic weaknesses include the lack of a broad partner ecosystem and consulting services to help with multimodel workload implementation. It scored well in search, analytics, HA/DR, data access capabilities, and the ability to deploy against multiple workloads. However, the solution lags in enterprisewide scalability, high performance, product maturity, automation, and general skills availability. A reference customer also confirmed the scale issue and said it is a "challenge to get it enterprise-ready." Nevertheless, ArangoDB is a good fit when looking for a low-cost solution to support moderate-sized multimodel-specific workloads.

- **EDB has basic multimodel capabilities and lags in cloud maturity.** PostgreSQL is an open source database that supports relational, key/value, XML, geospatial, and document, but it lags in native graph capabilities. EDB Postgres Advanced is a proprietary distribution of PostgreSQL that develops and integrates performance, security, and manageability enhancements into PostgreSQL to support enterprise-class workloads. A unique capability is its Oracle compatibility that helps organizations migrate Oracle databases to EDB Postgres Advanced with minimal changes. Customers use EDB to support various use cases, including customer 360, e-commerce, and operational and transactional workloads.

EDB's vision focuses on improving developer productivity when working with multimodel databases and extending features to support large hybrid and multicloud environments. Its strategic weaknesses include a lack of clarity on its cloud positioning and slow rollout of cutting-edge features, including multimodel tooling. Reference customers confirmed this strategy weakness and said that EDB's "tools are not yet mature" and the "shift to the cloud is unclear." EDB has good transactional capabilities, open source support, Oracle compatibility, technical support, and security features. However, some customers have reported high-end scale and performance issues and lags in comprehensive migration tooling to help simplify the migration from on-premises to the cloud. EDB is a good fit for customers that want to leverage an open source relational database for multimodel capabilities to support moderate-sized applications.

- **Neo4j is a popular graph database but with limited multimodel features.** Neo4j is a property graph database that continues to extend the platform to support multiple data models. Neo4j provides a multidata center, advanced security features, graph analytics, visual graph discovery, and exploration capabilities. Customers use the solution to support real-time recommendations, AI, graph-based search, data science, customer 360, and master data management.

Neo4j's vision focuses on broader data platform capabilities to support demanding business use cases across cloud and on-premises environments. Its strategic weaknesses are the lack of a roadmap for multimodel, its partner ecosystem, and its management commitment to multimodel as

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a strategic initiative. Neo4j's strengths include native storage and processing of graph data model and support for ACID compliance and transaction processing. However, it lacks comprehensive capabilities for document, key-value, and time-series data sets. Neo4j is a good fit for organizations that want to leverage graphs as the foundation for building multimodel applications. Neo4j declined to participate in the full Forrester Wave evaluation process.

Evaluation Overview

We evaluated vendors against 26 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 architecture, data models, automatic model and schema creation, transactions, query/data access, analytics/search, app development, streaming/loading, data security, administration, deployment, performance, scalability, HA/DR, tooling, workloads, and use cases.
- **Strategy.** Placement on the horizontal axis indicates the strength of the vendors' strategies. We evaluated roadmap, vision, strategy execution, technical support, and professional services.
- **Market presence.** Represented by the size of the markers on the graphic, our market presence scores reflect each vendor's product revenue, install base, market awareness, and partnerships.

Vendor Inclusion Criteria

Forrester included 15 vendors in the assessment: ArangoDB, Couchbase, DataStax, EDB, IBM, InterSystems, MariaDB, MarkLogic, Microsoft, MongoDB, Neo4j, Oracle, Redis Labs, SAP, and SingleStore. Each of these vendors has:

- **An enterprise-class multimodel data platform offering.** Vendors must offer the following multimodel data platform capabilities natively: 1) support for structured, unstructured, and semistructured data; 2) the ability to support two or more data models (relational, graph, key-value, document, and others); 3) data logging for persistence; 4) query language to access data; 5) support for multiple workloads, including transactional and operational; 6) the ability to be deployed on-premises or in the cloud, or both; 7) support for API access; and 8) tools to manage the database.
- **Standalone multimodel data platform.** We included only products that are not tied to any particular applications (such as packaged applications, software-as-a-service offerings, etc.) or specific business intelligence, predictive analytics, or middleware stack. The product/service must run in a stand-alone environment to support various kinds of workloads. It should have an SKU.

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- **A publicly available release.** Each participating vendor must actively market an enterprise multimodel database, platform, or similar solution. The product or cloud service version included in the evaluation must have been generally available either as a software or cloud service as of April 5, 2021.
- **A referenceable install base.** There should be 25 or more enterprise customers using the multimodel 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 multimodel 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.

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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 April 16, 2021, 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™ and New 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.

We help business and technology leaders use customer obsession to accelerate growth.

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