



Market Insight Report Reprint

Data platforms forecast: NoSQL databases soar, catalyze broader cloud adoption

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Highlights from the recent release of 451 Research's Data & Analytics Market Monitor: Data Platforms Q1 2022 reveal a healthy overall market forecast for data platform systems. All four data platform segments are forecast to see some growth, although not all segments will experience the same upward trajectory.

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Introduction

Highlights from the recent release of 451 Research's Data, AI & Analytics Market Monitor: Data Platforms Q1 2022 reveal a healthy overall market forecast for data platform systems. All four data platform segments – events/stream processing, distributed data grid/cache, analytic data platforms and operational databases – are forecast to see some growth, although not all segments will experience the same upward trajectory. Case in point, NoSQL databases – a subsection of the operational database segment – are forecast to more than double in adoption by 2026, while cloud adoption, which runs through all segments, will likewise see strong adoption as organizations continue to move new and existing data workloads off-premises.

THE TAKE

The overall data platforms market is as healthy as it has ever been. This ought to be welcome news not only to vendors providing databases and related services, but also to organizations that consume these data platform systems. A portion of this expected growth comes from cloud database adoption that is lifting all sectors of the data platforms market. Another notable growth driver is NoSQL databases, which maintain a 13% market share of the overall operational database market. By 2026 this number is expected to more than double to 26% and achieve a 22.5% compound annual growth rate (CAGR) over the same period. When this data is compared with our recent Voice of the Enterprise data, we believe the growth comes at the expense of traditional relational databases, particularly on-premises systems. Conversely, event/stream processing and distributed data grid/cache are forecast to see modest but healthy growth of 12.3% and 10.6%, respectively. Analytic data platforms growth is forecast at 9.4%. As a whole, the operational database segment is expected to see a modest 6.7% CAGR through to 2026, despite the rosy forecast for NoSQL databases. Compared with the other segments, the operational database segment is the largest by pure revenue at nearly \$50 billion, dwarfing the other categories combined. Some of IT's largest companies are dominant players in the operational database space, suggesting that even a nearly 7% CAGR is impressive for this sector.

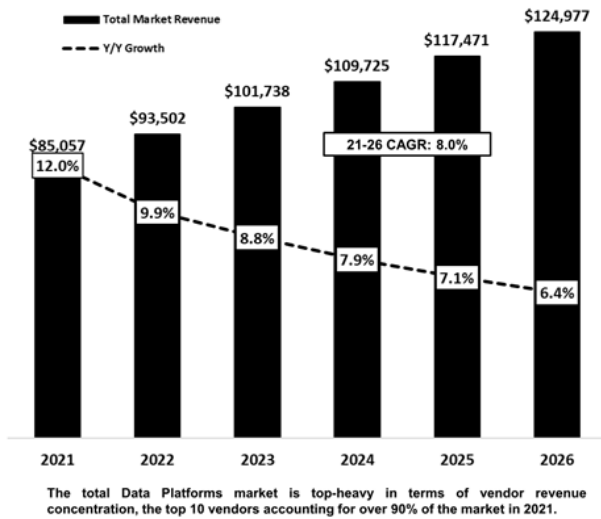
The big picture

Our market forecast is based on a bottom-up analysis of 124 vendors participating in four primary segments: operational databases, analytic data platforms, events/stream processing and distributed data grid/cache. Collectively, we expect the total data platforms market to grow from just over \$85 billion in 2021 to just under \$125 billion in 2026, representing a CAGR of 8.0%, as shown in Figure 1. The top eight vendors accounted for over 90% of the market in 2021, which makes the total data platforms market overwhelmingly top-heavy in terms of vendor revenue concentration.

Figure 1: Revenue Forecast

Data Platforms Market Overview

Global Data Platforms Market Revenue (\$m)



Vendor Revenue Distribution

Total Vendors 124

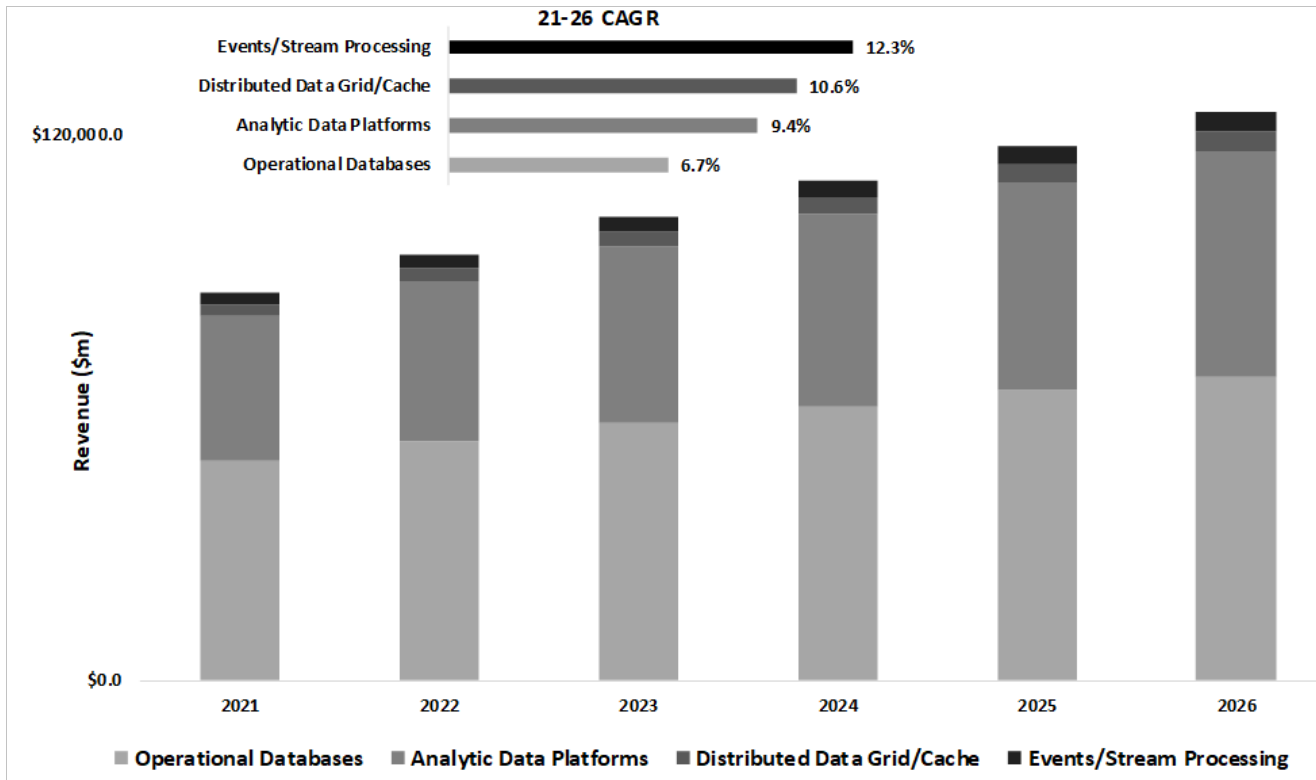
# Vendors \$1bn+	8	# Vendors \$50m-\$100m	11
% of total	6.5%	% of total	8.9%
Total 2021E Revenue	\$76,599	Total 2021E Revenue	\$823
% of total	90.1%	% of total	1.0%
# Vendors \$500m-\$1bn	5	# Vendors \$25m-\$50m	15
% of total	4.0%	% of total	12.1%
Total 2021E Revenue	\$3,854	Total 2021E Revenue	\$482
% of total	4.5%	% of total	0.6%
# Vendors \$250m-\$500m	3	# Vendors \$15m-\$25m	9
% of total	2.4%	% of total	7.3%
Total 2021E Revenue	\$1,173	Total 2021E Revenue	\$166
% of total	1.4%	% of total	0.2%
# Vendors \$100m-\$250m	10	# Vendors \$0m-\$15m	63
% of total	8.1%	% of total	50.8%
Total 2021E Revenue	\$1,603	Total 2021E Revenue	\$356
% of total	1.9%	% of total	0.4%

Source: 451 Research's Data, AI & Analytics Market Monitor: Data Platforms Q1 2022

Segments vary

Not all segments are expected to produce the same growth trajectory, as evidenced in Figure 2. Events/stream processing and distributed data grid/cache segments, for instance, are forecast to see modest overall growth through 2026, while analytic data platforms and operational databases are forecast to see the lowest segment-level growth. There are, however, pockets or subsectors that we expect to experience breakaway growth. Cloud database adoption, which cuts across all segments, is perhaps a catalyst for driving growth across all individual sectors. NoSQL database, which make up a portion of the operational database sector, is forecast to see significant growth over next four years and, like cloud adoption, is strongly contributing to the overall data platforms market outlook.

Figure 2: Data Platforms Forecast and CAGR by Segment

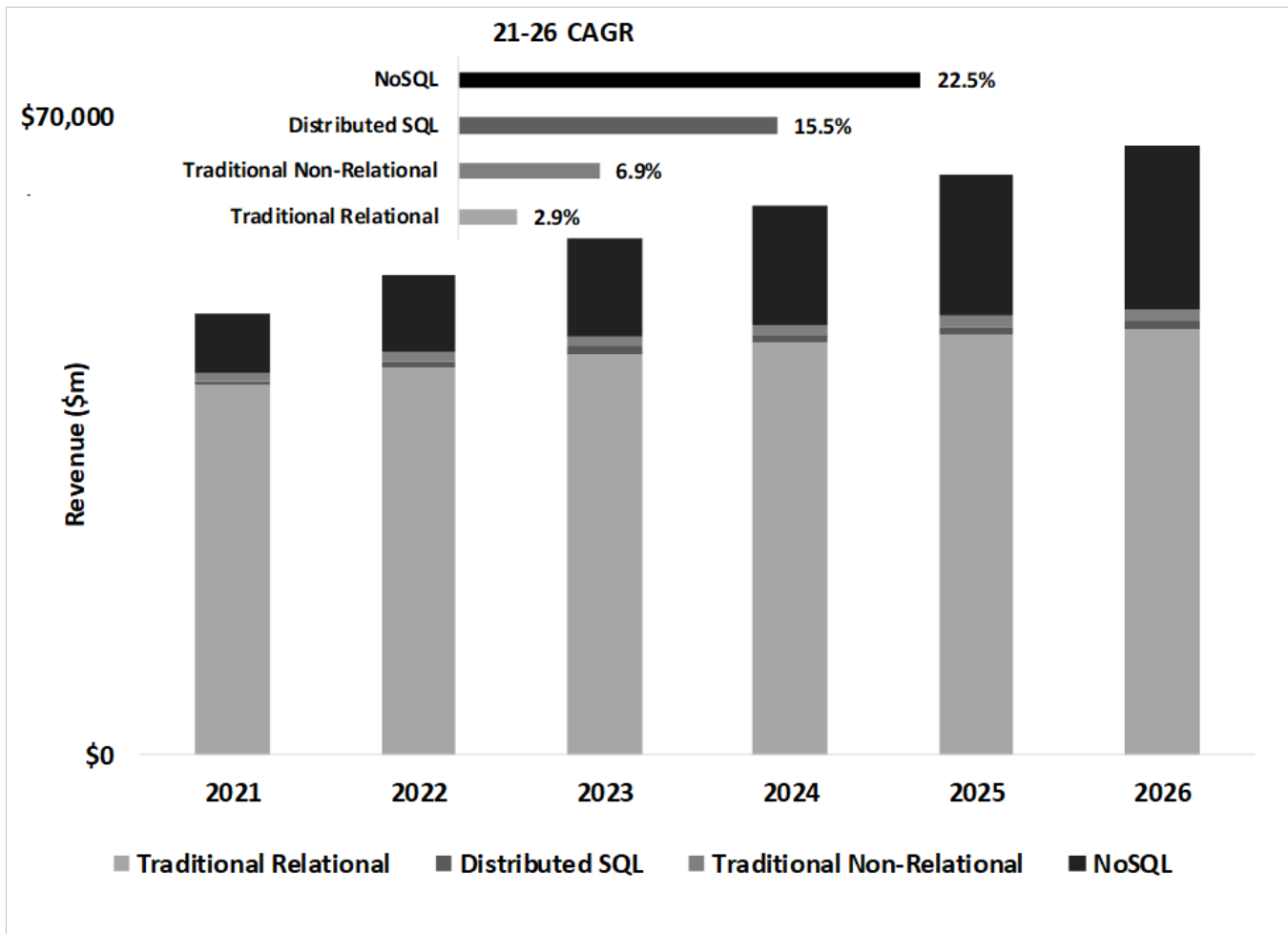


Source: 451 Research's Data, AI & Analytics Market Monitor: Data Platforms Q1 2022

NoSQL soars

The fastest growing subsegment across the entire data platforms landscape by a wide margin is the NoSQL sector, a component of the operational database market. While the NoSQL segment accounted for just over 13% of the total operational database market in 2021, we expect that figure to more than double through 2026 (see Figure 3). A significant amount of this growth in NoSQL is coming at the expense of the traditional relational database market, which we expect to witness a CAGR of 2.9% through 2026. This phenomenon has been evident for some time, with results from our mid-2021 Voice of the Enterprise end-user survey pointing to 29% of respondents expecting to migrate existing on-premises relational operational workloads to NoSQL databases.

Figure 3: Operational Database Forecast and CAGR by Segment

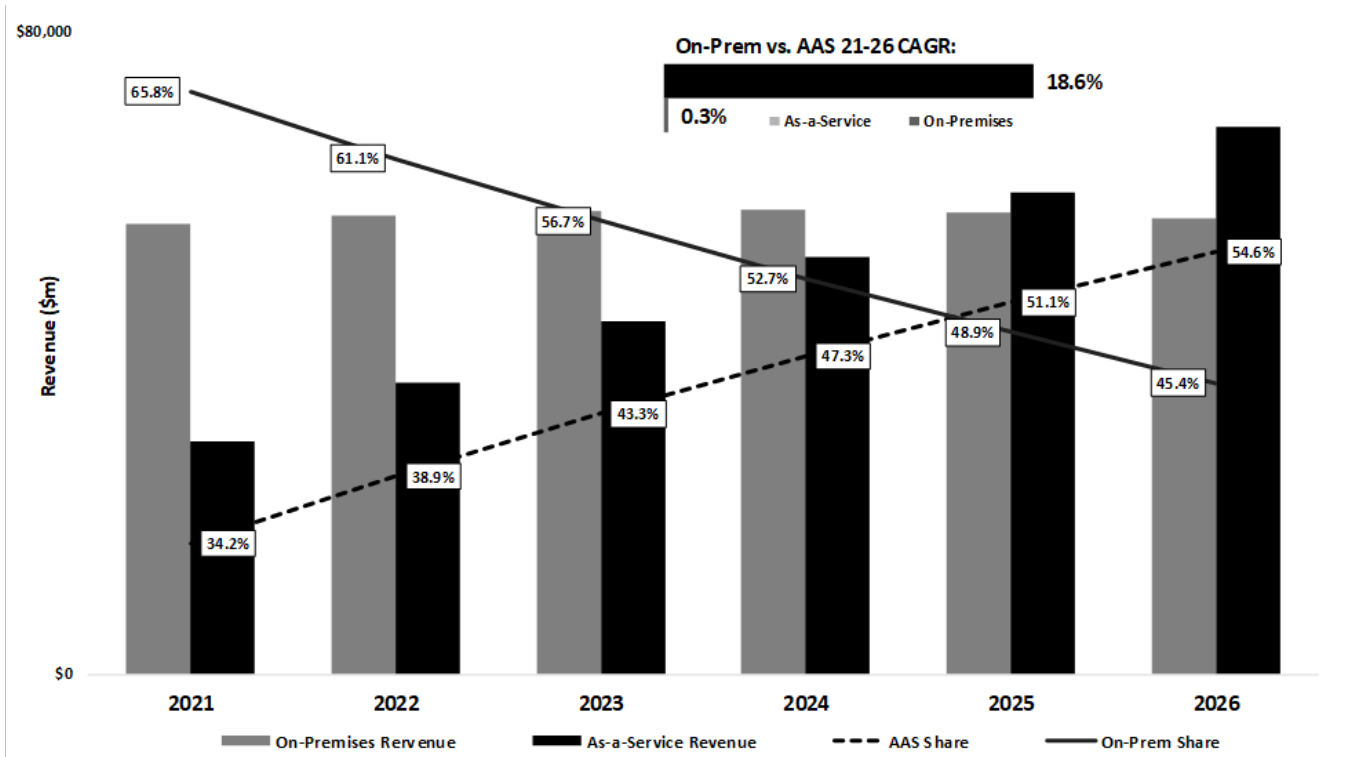


Source: 451 Research's Data, AI & Analytics Market Monitor: Data Platforms Q1 2022

More cloud adoption

The transition from on-premises to cloud is also reflected in our market forecast (see Figure 4). This growth varies across the 124 vendors we are tracking, as well as the segments and subsegments included in our analysis. Nonetheless, in aggregate, we expect the cloud component of the market to witness an 18.6% CAGR through 2026, with the on-premises market expected to remain essentially flat over the same period with low-single-digit growth through 2024, followed by year-over-year contractions through 2026. The largest gaps between cloud and on-premises growth by segment are witnessed in operational database (18.2% versus -2.3%) and analytic data platforms (19.3% versus 2.5%).

Figure 4: Global Data Platforms Revenue by Delivery Model



Source: 451 Research's Data, AI & Analytics Market Monitor: Data Platforms Q1 2022

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