

Solution Spotlight

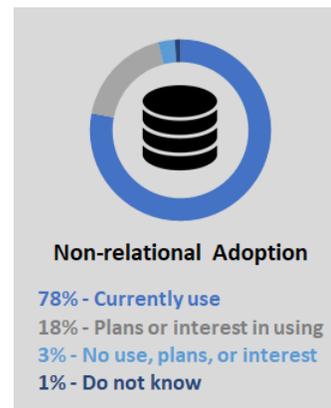
Enabling Data Autonomy for a Modern, Real-time Enterprise

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Introduction – Market Overview

The need to modernize enterprise applications is becoming a mandate for all organizations to better meet the growing demands of end-users. Whether that means moving some (or all) applications to the cloud or adopting new technologies to be more data-driven, organizations are looking for the best ways to become more agile, scalable, and resilient, while retaining complete control of their data. And they want to be able to do all of this while remaining vendor-agnostic at an infrastructure or service-provider level to not only avoid vendor lock-in, but to achieve agility as a core requirement. Organizations require all of the above to help them deliver a predictable experience to their end-users based on their dynamically adjusting needs regardless of where that data resides or with whom it's residing.

To not only achieve the goals of modernization and becoming more data-driven, but also to enable true data autonomy, organizations are turning to non-relational database technology designed with the cloud in mind for flexible and seamless data accessibility and control. In fact, ESG recently surveyed 354 IT and business professionals who are familiar with their organization's current database environment and forward-looking strategies and asked about non-relational adoption. An impressive 78% of respondents currently use non-relational (i.e., NoSQL) databases, while another 18% plan to use or have interest in using the technology.¹ Pair that data with the finding from the same research survey that the largest percentage of respondents (43%) reported that a database offering being cloud-based was among their top decision criteria when it comes to evaluating and selecting these types of technology solutions and it is no surprise that multi-homed, scale-out capabilities are now a necessity for organizations.



Data Autonomy Is Essential

Enabling data autonomy requires much more than just deploying a cloud-agnostic database technology in the cloud. Imagine that an organization has selected the technology and cloud provider and deployed applications. What happens when something changes that could have an immediate and major impact to the business? What if the cloud provider's pricing changes—or better yet, what if the business wants to take advantage of a public cloud price war? What if a new mandate dictates a specific cloud provider? Worst of all, what if a cloud provider becomes a direct competitor through a recent acquisition or new business direction? An organization's data may be held hostage in any of these situations, a troublesome situation, especially since the organization relies on that data for real-time business decisions.

¹ Source: ESG Brief, [Market Disruption: Next-generation Databases](#), April 2017.

The need for data autonomy regardless of the technology provider is the first concern. Next comes addressing other business requirements, such as data compliance, data governance, and data sovereignty. For data sovereignty specifically, i.e., to accommodate public regulatory requirements with respect to data privacy and data location, the adoption of cloud technology presents a challenge. Organizations want the always-on scalability, elasticity, and resiliency of the cloud, but ultimately, the data must be stored somewhere. This furthers the need for a platform that offers data autonomy to not only ensure that data is located, protected, and available at the right locations, but that data can immediately conform to a new rule or requirement by seamlessly being migrated to a new location or cloud/service provider.

Selecting the Right Platform

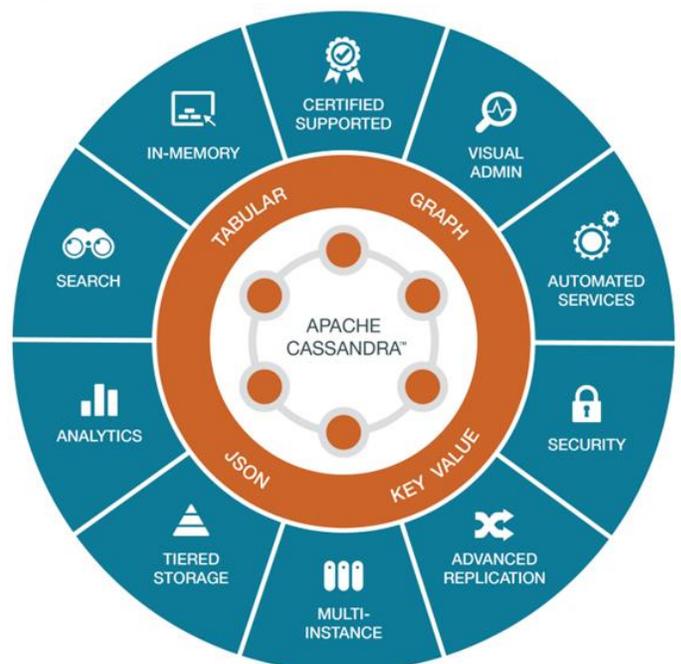
Organizations wanting to enable data autonomy require a data platform with the qualities necessary to handle data growth, mixed workloads, and the expanding need for innovative cloud-based applications. As such, organizations should look for the following five key qualities in a modern data platform: it needs to be contextual, always-on, real-time responsive, distributed, and scalable (CARDS).

- **Contextual** – The data platform provides each individual user with a relevant experience in the moment of interaction.
- **Always-on** – High resiliency for continuous availability to withstand potential failures and growth spikes in the business-critical data layer.
- **Real-time** – Instant responsiveness and actionable insights made possible with strong search, analytics, and in-memory processing.
- **Distributed** – Data availability across multiple cloud regions and data centers, and geographies near customers to improve performance and decrease latency.
- **Scalable** – Scale-up and -out capabilities that keep pace with the elasticity required by any cloud-based application.

DataStax

DataStax Enterprise (DSE) offers a comprehensive, always-on data platform that enables organizations to achieve complete data autonomy. With more than 60% of DataStax customers running DSE on the public cloud and more than 40% of those also running in a private cloud and/or hybrid cloud, enterprises are gaining an operational data management platform that can deliver the scale, agility, and real-time response that organizations require. DSE is built off the widely adopted, open-source Apache Cassandra database, and is paired with additional components to deliver the real-time data insights and effortless scaling that are expected by enterprises looking to modernize. The mixed workload and multi-model design allows for the consumption of varying forms of data without the need for multiple databases.

The DataStax Managed Cloud offering includes DSE's wide range of integrated functions in a white glove managed service. This enables users to spend more time on their core competency developing innovative applications and effective real-time data analytics strategies to gain insight into their data, and less time building and managing the infrastructure.



Customers Seeing Benefits

DSE aims to make life easier for its customers with a mix of infrastructure flexibility and performance already proven to be a winning combination with customers. One of its large and successful deployments is at Walmart. With DSE, Walmart has been able to maintain its required data autonomy without sacrificing performance or capabilities. As companies like Walmart rely on their ability to rapidly respond to not only customer behavior and requests, but to changes in the competitive market, they place a premium on access to real-time analytics, while remaining as technologically independent and cloud-agnostic as possible. Walmart faced increasing competition from leading cloud infrastructure-as-a-service providers who were growing in the retail space. The need for large, flexible deployments and the ability to remain agile are paramount to Walmart's ongoing business strategy. With DSE, Walmart gets to maintain data autonomy and loses none of its services in the process because they are all part of DataStax's fully integrated platform.

The Bigger Truth

As organizations look to transform and modernize their IT infrastructure with more agile business processes, cloud adoption and data analytics initiatives are becoming essential. By leveraging a comprehensive data

platform that relies on a cloud-based non-relational database, DataStax enables organizations to fulfill the essential need of data autonomy in an operationally efficient, scalable, and agile way. Enterprises gain peace of mind knowing they are in complete control of their data at all times and have the agility to instantly and seamlessly respond to the business in real-time. ESG recommends DataStax as a foundational platform to deliver the true data autonomy that organizations need.



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