

# TEN REASONS WHY CUSTOMERS CHOOSE MAPR-DB

MapR-DB is a high performance NoSQL (“Not Only SQL”) database management system built into the MapR Converged Data Platform. MapR-DB is a global multi-model database. It brings together operational applications, analytical applications, real-time streaming, and other workloads to enable next-generation data-intensive applications.

Here are the top 10 reasons why customers choose MapR-DB.

## 1

### **MULTI-MODEL FLEXIBILITY**

MapR-DB supports multiple data models including document, wide-column, key-value, and time series on a unified foundation. This provides developers with the flexibility to choose the right data model for a given use case, **reducing the time-to-market for new applications and features, creating new sources of revenue.** Being able to use the same database for a broader set of applications simplifies operations and lowers the TCO.

## 2

### **NATIVE JSON SIMPLICITY WITH EXPRESSIVE QUERIES**

MapR-DB is a scalable document database with native JSON support. Each sub-document and element in MapR-DB is indexed on disk separately. As a result, MapR-DB can read/write a sub-document or an element directly without having to read/write the entire document, providing extremely high throughput and performance. The built-in granularity also provides high write concurrency as the updates work on the element level, reducing the number of conflicts. MapR-DB also provides effortlessly scalable secondary indexes and rich efficient queries on JSON documents to leverage indexes from applications and perform SQL analytics.

## 3

### **EXTREME PERFORMANCE AND EFFORTLESS HORIZONTAL SCALE**

In recent benchmarks validated by ESG, a third-party validation firm, MapR-DB was observed to be up to 5X faster than Cassandra and up to 10X faster than HBase. MapR-DB is built for performance and throughput at scale and handles mixed workloads effectively. As deployments scale with more data and more users, MapR-DB scales linearly and maintains the performance without latency spikes. MapR-DB scales in many dimensions without limits—PBs of data, thousands of nodes, trillions of documents, and millions of tables. Data is automatically sharded, balanced/re-balanced as nodes get introduced or fail, all with no impact to SLAs and no manual intervention by users.

## 4

### **STRONG CONSISTENCY - NO DATA LOSS**

MapR-DB has a strong consistency model by default and can be used as a System of Record. This means MapR-DB has in-sync replication (factor 3) always on, and once data is acknowledged, it will always be persisted and never lost or corrupted. This makes MapR-DB more reliable than databases which follow the eventual consistency model, where applications can read stale data, and data may be lost even after acknowledgment of receiving data.

## 5 EXTREME HIGH AVAILABILITY

As an integral component of the MapR Converged Data Platform, MapR-DB inherits the enterprise features of the underlying platform with respect to failure handling, recovery, and resiliency. The MapR platform is battle tested in production by customers across thousands of nodes in all industries. MapR customers consistently report extreme high availability and uptime.

## 6 EVERY CLOUD AND IOT EDGE OPTIMIZED MULTI-MASTER DATABASE

MapR-DB supports immediate replication of write operations from any active MapR-DB cluster to other active MapR-DB clusters. This is important for synchronizing data between separate, geographically remote clusters with copies of the same data that are deployed physically near specific user groups to reduce network latency. This is also useful in disaster recovery configurations in which a low recovery point objective (RPO) can be achieved by minimizing the differentials between the source and replica clusters. The extremely reliable multi-master replication capability allows MapR-DB to seamlessly span across on-premises, edge, and multi-cloud environments forming a global database for the new age of applications.

## 7 OPTIMIZED MULTI-TENANCY FOR THOUSANDS OF APPS

The MapR Converged Data Platform provides volume and topology based data placement controls to support multi-tenancy, which means multiple MapR-DB applications can run securely and independently in the same cluster without impacting SLAs. This results in lower administrative and hardware costs.

## 8 IN-PLACE SQL AND ADVANCED ANALYTICS/ML

MapR-DB is natively integrated with machine learning and analytical tools to enable advanced analytics, data exploration, and interactive SQL, letting you immediately analyze or process live data and apply machine learning. With in-place analytics and machine learning, you can build and serve ML models as well as run real-time BI workloads on operational data sets. Large-scale analytics can leverage data in MapR-DB and combine it with data in other systems such as Hive Tables, HDFS, and Parquet. MapR-DB provides an open API architecture that allows easy integration of third party ML and analytical frameworks that follow standard APIs.

## 9 INTEGRATED STREAMING FOR REAL-TIME DATA INGEST, PROCESSING, AND INTEGRATION

MapR-DB is integrated with MapR-ES out of the box. MapR-ES is a global event streaming system that enables real-time data ingestion and continuous stream processing. MapR-DB, in conjunction with MapR-ES, enables simplified data ingestion and ETL, and allows multiple applications and systems to share information and be synchronized in real-time.

## 10 ROBUST SECURITY AND FINE-GRAINED ACCESS CONTROL

**Authentication:** MapR-DB can authenticate users with Kerberos or LDAP. MapR offers a standards-based authentication system as a simpler alternative to Kerberos that leverages Linux Pluggable Authentication Modules (PAM) to provide the widest registry support.

**Access Control:** Access control expressions (ACEs) control permissions at various levels including column and sub-document by a combination of user, group, and role.

**Auditing:** MapR-DB audit logs help to analyze user behavior and meet regulatory compliance requirements. MapR-DB uses the JSON format to log accesses at various levels including the column and sub-document levels. MapR also audits at the administrative, authentication, and file levels.

### MapR-DB Capabilities Overview

