

COUCHBASE SERVER 5.0 DATASHEET

Unmatched flexibility, performance, and manageability.

Key benefits:

Unmatched agility and flexibility

Flexible data modeling. Build applications that easily evolve over time.

Powerful SQL query language. Flexible data access using concise, declarative queries with N1QL.

Built-in query tools. Simplify query development with an integrated query editor, query plan visualizer, and schema browser.

Mobile enabled. Integrated with Couchbase Mobile for automatic synchronization, offline-first apps, and full stack security.

Unparalleled performance at scale

Consistent high performance. Support very high throughput rates (>1M ops/sec) with sub-millisecond latency.

Flexible scaling. Scale compute, storage, query, full-text search, and analytical queries separately.

Couchbase Server, the foundation of the Couchbase Data Platform, allows enterprises to deliver exceptional customer experiences with applications that are built faster, perform better, and are easier to manage. Built on the most powerful NoSQL technology, it provides unmatched agility and manageability – as well as unparalleled performance at any scale – to power ever-richer and ever more personalized engagement. Couchbase Server leverages innovative, open source, distributed database technology and supports a wide variety of Engagement Database use cases, like entitlement management, customer 360, availability management, and more.

Flexible SQL-based querying

Build apps faster by querying flexible JSON data using SQL. The N1QL query language delivers low latency queries on distributed data, regardless of scale. Full SQL syntax includes filtering, projection, aggregation, joins, and subqueries across simple and nested data.

Built-in intelligence

Better customer experiences result from smarter, richer, more insightful applications. Quickly integrate intelligent full-text search and ad hoc analytical queries into your apps.

Memory-first architecture

Deliver consistent high throughput, low latency data access using a memory-first, multi-threaded architecture that leverages integrated caching, memory-resident datasets, memory-optimized indexes, and memory-to-memory replication. Able to fully utilize multi-core processors and terabytes of memory.

Active-active global replication

Ensure always-on high availability, disaster recovery, and flexible global replication with cross datacenter replication (XDCR) that can scale and evolve with your business. Replicate data between clouds and data locality to ensure fast, responsive apps.

Multi-dimensional scaling (MDS)

Evolve your infrastructure with flexibility. MDS delivers revolutionary distributed architecture providing compute, storage, and processing workload partitioning to meet ever-changing requirements.

Simple, comprehensive, unified management

Protect your data on the wire and in the cloud with enterprise-grade security including auditing, role-based access control, and encrypted communications. Simplify resource management and monitoring with the push of a button via a web-based console including a full REST API for integration with existing tools.



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Unmatched flexibility, performance, and manageability.

Easy to manage

Elastic scalability. Scale from a few nodes to many, one datacenter to multiple with push-button simplicity.

Always-on availability. 24x7 uptime with built-in replication, automatic failover, and zero-downtime operations.

Enterprise-grade security. Secure your data with role-based access controls, auditing, and encrypted communications.

Great management tools. Manage with ease using a modern web-based console, CLI tools, and REST APIs.

Easy to integrate

Spark. Support for Structured Streaming API, RDDs, DataFrames, DStream, and Spark SQL.

Kafka. Support for Kafka Connect, Couchbase Server as consumer and/or producer, Confluent Control Center.

Hadoop. Support for MapReduce, HDFS.

SQL. Certified JDBC/ODBC drivers for integrating with BI, reporting, and ETL tools.



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Data access

- Key-value and SQL data access
- Partial reads and updates for accessing and modifying specific fields
- Array, Map, Set, and List operations for inserting, prepending, and appending elements
- Counters for incrementing and decrementing numeric fields

Querying and indexing

- SQL, full-text search, and ad hoc analytical queries
- Query editor, schema browser, and query plan visualization tools
- Schema inference for browsing the data model, document types, and fields
- Left outer and inner joins for powerful querying, flexible data modeling
- Simple, compound, partial, functional, covering, memory-optimized, and adaptive indexes
- Geospatial indexes for querying multi-dimensional data and complex geometries
- Incremental MapReduce for low latency queries with precomputed results
- Certified JDBC/ODBC drivers for integrating with BI, reporting, and ETL tools

Performance and scalability

- Memory-first architecture, including in-memory buckets and memory-optimized indexes
- Parallel query execution leveraging multi-core processors
- Multi-Dimensional Scaling (MDS) for optimized hardware profiles and workload isolation
- Configurable query consistency for faster queries with higher consistency

High availability and disaster recovery

- Built-in index replication
- Cross datacenter replication (XDCR) for active-active, global, multi-cloud deployment
- Rack awareness for intelligent replica placement on different servers and racks
- Incremental and cumulative backups for faster time to recovery
- SDK multi-datacenter support for building resilient apps

Security

- Role-based access control for administrators, users, and applications
- LDAP integration for external identity management and security policies
- Encrypted communications for secure data access and administration
- X.509 certificates for management and rotation with trusted certificate authorities
- Auditing for capturing 25+ types of admin events to meet regulatory standards

Administration

- Web-based console for push-button administration, comprehensive monitoring
- CLI/REST APIs for scripted administration, diagnostics, and configuration
- Query monitoring for listing/terminating active queries, listing completed queries

About Couchbase

Couchbase's mission is to be the data platform that revolutionizes digital innovation. To make this possible, Couchbase created the world's first Engagement Database. Built on the most powerful NoSQL technology, the Couchbase Data Platform offering includes Couchbase Server and Couchbase Mobile and is open source. The platform provides unmatched agility and manageability – as well as unparalleled performance at any scale – to deliver ever-richer and ever more personalized customer experiences.

Couchbase customers include industry leaders like AOL, Amadeus, AT&T, Cisco, Comcast, Concur, Disney, Dixons Carphone, eBay, General Electric, Marriott, Nordstrom, Neiman Marcus, PayPal, Ryanair, Rakuten/Viber, Tesco, Verizon, Wells Fargo, as well as hundreds of other household names.

Couchbase investors include Accel Partners, Adams Street Partners, Ignition Partners, Mayfield Fund, North Bridge Venture Partners, Sorenson Capital, and WestSummit Capital. For more information, please visit: www.couchbase.com