

## REPORT REPRINT

# Couchbase directs latest Mobile release toward driving the customer experience

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The company recently rolled out a new version of Couchbase Mobile, with updates geared toward delivering an enhanced user experience, including full-text search, data recovery and expanded syncing, among other updates.

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Couchbase recently rolled out a fresh version of its Couchbase Mobile offering, which includes a collection of updates geared primarily toward delivering a stronger end-user experience for its customers. This most recent 2.0 version comes after several years of research and development on Couchbase's part to gather customer feedback and input, and represents a significant milestone for the company, given that the previous Mobile 1.0 version was offered in 2014. Updates in Couchbase Mobile 2.0 include full-text search, better data recovery and enhanced syncing, among others.

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## THE 451 TAKE

With digital transformation all the rage these days, Couchbase is focusing its efforts on this trend, as evidenced by the company's latest Couchbase Mobile 2.0 release. This release comes four years after the initial release of Mobile, which indicates that Couchbase was quite deliberate in canvassing its user base to deliver key features and to establish itself as a noted player in the mobile space. The new features focus a good deal on enabling a stronger user experience - full-text search being one such example. While mobile is a good fit for NoSQL, we are starting to see other NoSQL address this space, as well. However, the public cloud vendors have been active in mobile, and present Couchbase with, perhaps, its greatest competition.

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## CONTEXT

In our previous coverage, we described the company's strategy of positioning its NoSQL database as an 'engagement database,' which certainly rolls off the tongue easier than 'system of engagement.' Regardless, management notes that the branding refresh has gone well, further highlighting the company's focus on strengthening the 'engagement' with its customers, which is particularly relevant given the nature of the latest updates included as part of the Mobile 2.0 release.

On the business front, Couchbase taken in \$146m in total funding to date. Also noted is the fact that Couchbase is putting a good deal of its resources behind its mobile strategy, which now represents more than 20% of the company's customer base.

With Couchbase's mobile adoption growing, some customer-use scenarios are worth noting. For instance, in the retail space, Tommy Hilfiger uses Couchbase for a type of digital showroom where wholesale buyers can browse the forthcoming season's fashions from a mobile device, which includes product details, pricing and availability dates. Another customer, United Airlines, uses Couchbase Mobile as a scheduling platform for its pilots, flight attendants and crews that oversee each day's flights. Another customer (not referenceable by name) that operates in the energy sector uses Couchbase Mobile to facilitate field operations, such that field workers carry mobile devices and are able to interact with other energy customers both in metropolitan and remote locations.

At a high level, Couchbase offers its Couchbase Data Platform, which consists of Couchbase Server; Couchbase Mobile; a collection of connectors such as Apache Spark, Apache Hadoop, Kafka and Elasticsearch; and the company's SQL-based query tool, N1QL. Couchbase Mobile consists of Couchbase Lite, a lightweight iteration of the company's NoSQL database, and the Sync Gateway, which drives synchronization between Couchbase Server and Couchbase Lite. Supported platforms include iOS, Android, .NET and Xamarin.

For the Couchbase Mobile 2.0 release, the company is rolling out a number of updates that focus on improvements made to Couchbase Lite, the lightweight embedded NoSQL database. One update includes full-text search, already available on Couchbase Server, but now available on Couchbase Lite. Previously, search was enabled through what Couchbase called Map-Views, which consisted of indexes that were created and persisted to disk. Now, Map-Views are no longer required - users can leverage a simplified interface that converts the user input text to N1QL, the company's declarative query language, to carry out the search, including the ability to query an entire JSON document.

Data recovery methods have also been enhanced, particularly at the edge. For organizations that might use mobile devices in the field, where those devices can be become damaged, losing data is a big concern. For these situations, Couchbase enables on-device replication such that the data can be replicated to removable media, thus eliminating the potential to lose data should the device become permanently damaged.

Couchbase is also strengthening its synching capabilities, not only between mobile devices (peer-to-peer), but also between devices and servers (client-server). Peer-to-peer sync affords users the ability to sync field devices where syncing to a server may not be available. For client-server syncing between either devices to the gateway or from the gateway to the server, Couchbase has released a new replication protocol based on WebSockets that provides greater performance, as well as the ability to handle higher-concurrency loads.

## COMPETITION

Couchbase often competes with other NoSQL vendors, but what differentiates the company is its mobile platform offering, which includes not only a lightweight version of its database that can be installed on edge devices, but also a gateway offering that syncs with edge devices as well as the Couchbase Server. That being the case, potential competitors would be vendors with similar mobile platforms, including those with back-end services. Specific players include Google's Firebase, which comes with built-in storage, along with application development and testing tools, all hosted on Google's cloud platform. Another is AWS Mobile, a suite of services that includes integration with Amazon DynamoDB, a NoSQL database, and application starter tools and analytical tools – all hosted on AWS. On Microsoft Azure, it's a matter of integrating services together, such as Azure Functions (serverless back end); Mobile Apps (full back-end service), which can leverage Cosmos DB; Azure SQL Database; and Azure Storage. Also worth noting is Oracle's Mobile Data Sync.

More specific to NoSQL, MongoDB recently announced a beta version of MongoDB for mobile, called MongoDB Mobile, that is expected to leverage the Stitch Mobile Sync (beta) service for syncing, which is part of the company's Stitch services platform. Still, other NoSQL vendors that purport the capability to drive mobile applications include DataStax, Redis Labs, IBM Cloudant and MarkLogic.

There is also a collection of embedded databases (some open source) that can be installed on edge devices, some of which may or may not require other back-end services or infrastructure to enable the full mobile experience. A few include SQLite, Ormlite, Oracle Berkeley DB, HarperDB and Realm, which not only includes the Realm object database, but also offers a platform for data synchronization.

## SWOT ANALYSIS

### STRENGTHS

Couchbase Mobile is maturing, and comes as a full platform offering that includes the Sync Gateway, as well as Couchbase Lite, which is functionally similar to the Couchbase Server.

### WEAKNESSES

Couchbase has made some good strides, but lags behind in market share and awareness compared with some of its peers.

### OPPORTUNITIES

Mobile continues to be a strong opportunity for the company – many enterprises are embarking on digital transformation efforts, and mobile is not as top-of-mind for other NoSQL vendors.

### THREATS

While Couchbase competes with other NoSQL vendors, and even the traditional relational database vendors on a broader level, for its mobile strategy, it is likely to go up against the public cloud platform vendors as its primary competition.