

# Couchbase Edge Server

A LIGHTWEIGHT, OFFLINE-FIRST DATABASE SERVER BUILT FOR THE RESOURCE-CONSTRAINED EDGE

## Key benefits

- Edge Server is a cost-effective, lightweight database and sync solution designed to run in resource constrained edge computing environments.
- Edge Server addresses the challenge of limited compute capacity inherent in many edge deployments, which are often constrained by factors like space, power, and logistics.
- Edge Server addresses the cost barriers associated with adopting edge computing technologies across a high volume of edge locations.
- Edge Server provides flexible data access options to meet the diverse requirements of applications running on edge devices.

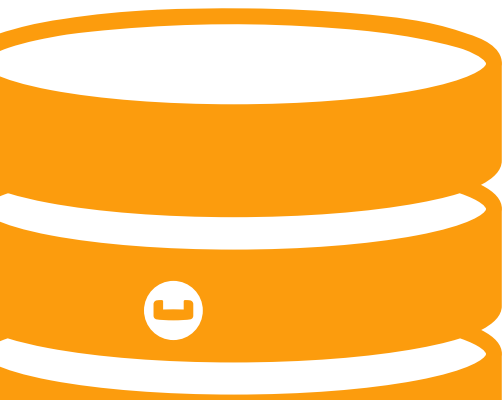
## Built to run on resource-constrained edge hardware to power fast, reliable edge apps that work even without internet

While internet dependencies are a known challenge that can cause latency and downtime for edge applications, sometimes getting around those challenges by storing and processing app data locally at the edge can also pose a challenge. This is especially true when there are many clients and limited local storage and compute resources available to serve them, such as on planes, in small restaurants, in a logistics warehouse, even a big box retailer in the middle of a major city might find themselves operating under internet challenged and computing resource constrained conditions.

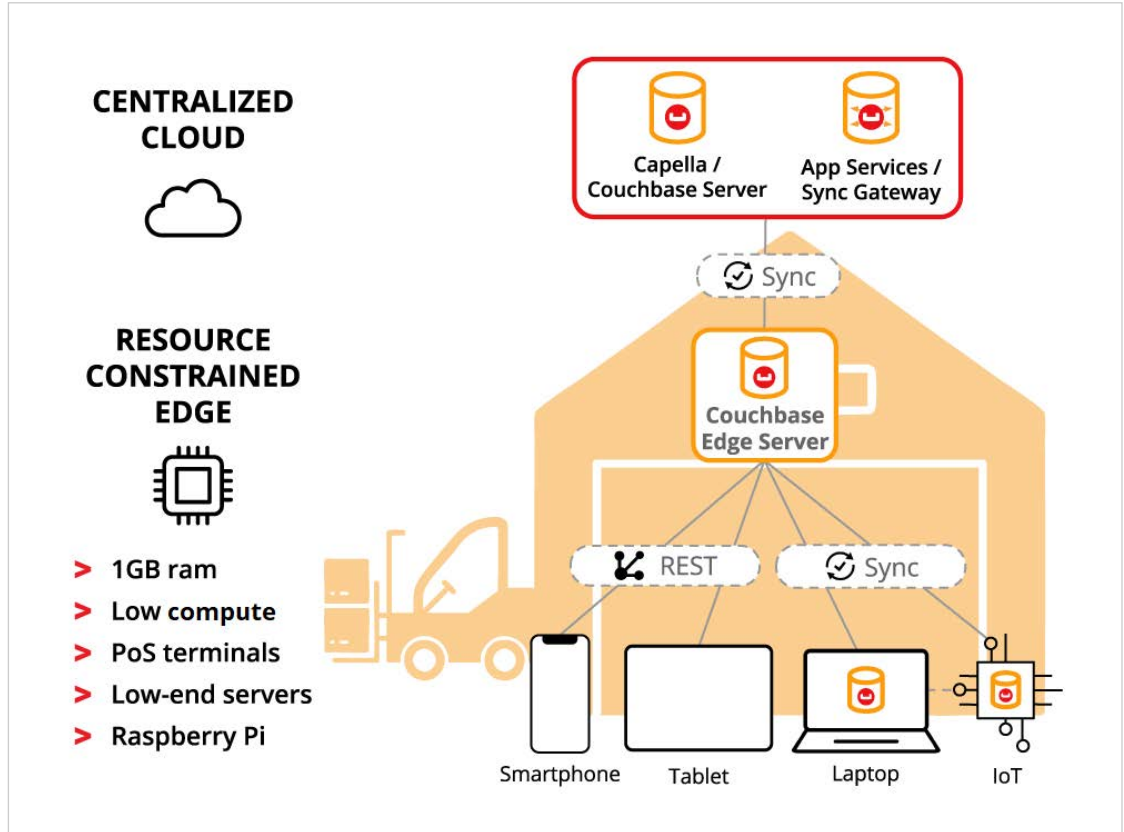
Moving data processing to the edge to get around internet dependencies is a fundamental part of edge computing. But when you lack the infrastructure, horsepower and dedicated IT support to install and maintain a full blown database and sync solution at the edge, how do you support the apps that need to run there? And while you need to store and process data locally, another critical component is synchronizing the data to the cloud for permanent storage. How do you ensure data consistency across potentially hundreds of edge locations?

## Couchbase Edge Server

Couchbase Edge Server is a lightweight, offline-first database server designed to provide low latency data access, storage, and processing for apps in internet challenged and computing resource constrained environments. Edge Server also offers automatic data synchronization with the Couchbase Capella Database-as-a-Service in the cloud, so data stays consistent across the app ecosystem.



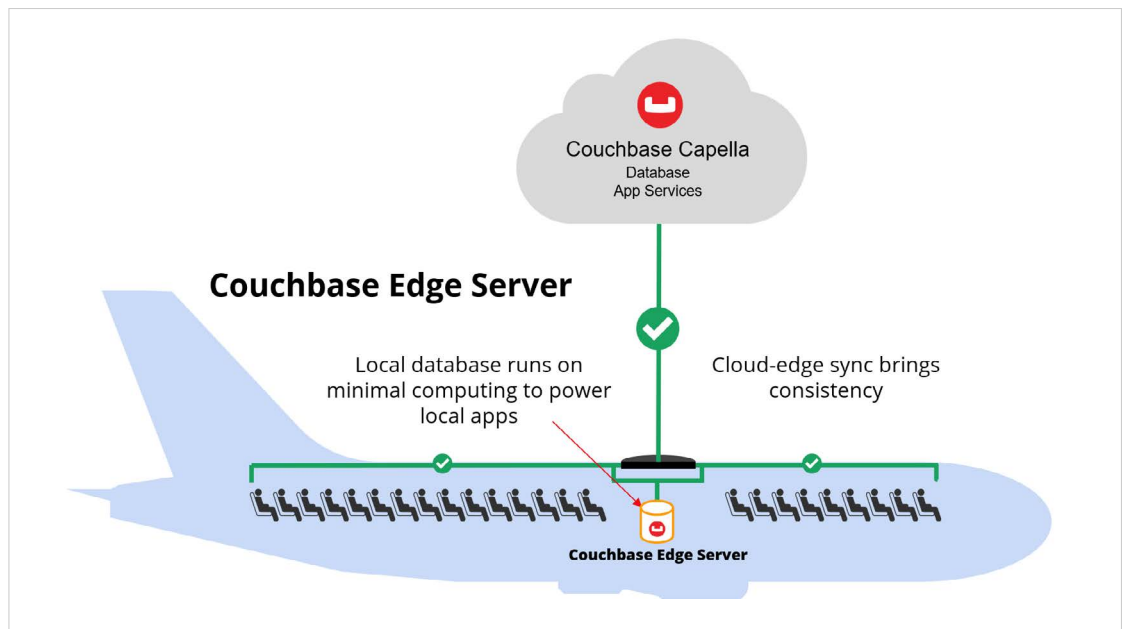
With the Edge Server, app clients can access data even when disconnected from remote servers, while data synchronization to the cloud happens in the background whenever the internet is available. Data access is provided through a simple RESTful interface that any HTTP client can use. Additionally, for more advanced applications, Couchbase Lite embedded clients can sync data directly with the local Edge Server.



#### FEATURES

- **REST API:** A RESTful interface that allows any HTTP client, including browser applications, to access, query and listen to changes in data.
- **Cloud Sync:** Enables Edge Server to sync data with remote upstream Sync Gateway/Capella App Services over WebSockets based replication protocol.
- **Edge Sync:** Allows downstream Couchbase Lite applications at the edge to sync data with Edge Server.
- **Server Sync:** This interface can be used to sync data with another Edge Server. This is useful to setup a secondary Edge Server as backup (for HA).





## Key enablers

- Edge Server runs where computing resources and RAM are not sufficient for a multi-node database server.
- Sync data upstream with Capella DBaaS in the cloud and downstream with local Couchbase Lite clients for consistency.
- Built on Couchbase Mobile technology, which has been powering customers' business-critical apps for over a decade.

## FLEXIBLE DATA ACCESS

- A Edge Server includes a simple HTTP-based RESTful interface, enabling any downstream HTTP-based client, such as browser applications, to access data, perform queries, and listen to change feeds.
- Edge Server also includes a WebSockets-based data synchronization protocol that allows downstream Couchbase Lite-enabled applications at the edge to sync data effectively.

## RUNS WHERE OTHER DATABASE SERVERS CANNOT

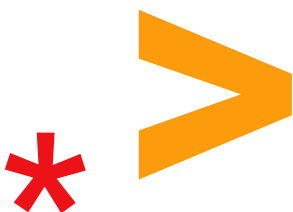
- Edge Server can run on extremely resource constrained hardware with minimal RAM at the edge, such as single board computers like Raspberry Pi.
- Edge Server is cost-effective for deployment across a large number of resource-constrained edge locations such as airplane fleets, restaurant chains, retail locations, warehouses and more.

## LEARN MORE

To learn more, contact your Couchbase sales representative today or visit: <https://www.couchbase.com/products/edge-server/>

## DOWNLOAD

<https://www.couchbase.com/downloads?family=edge-server>



Modern customer experiences need a flexible database platform that can power applications spanning from cloud to edge and everything in between. Couchbase's mission is to simplify how developers and architects develop, deploy and run modern applications wherever they are. We have reimagined the database with our fast, flexible and affordable cloud database platform Capella, allowing organizations to quickly build applications that deliver premium experiences to their customers – all with best-in-class price performance. More than 30% of the Fortune 100 trust Couchbase to power their modern applications. For more information, visit [www.couchbase.com](http://www.couchbase.com) and follow us on X (formerly Twitter) @couchbase.

