

Couchio

Agora – CouchDB, Simplicity in Development

Situation

Project Agora is a collaboration between Vodafone R&D and Ocasta Labs, aimed at creating an open trading platform where individuals and groups come together to buy, sell and exchange goods.

The heart of Agora is the descriptions and photos of goods available or wanted, which are searchable by full text or location. An Android client application provides easy access to users, and a Twitter-like RESTful API opens the data store to developers.

Solution

After looking at alternatives, the Agora team selected CouchDB because of the simplicity of development and the flexibility offered by a schema-less database. No schemas meant the Agora team would not need to implement any Object/Relational mapping or define custom data formats. Also, they knew their data model would inevitably evolve and having flexibility with their data in the future was crucial. With CouchDB, they could simply slot in new data fields without table migration scripts to worry about.

Exposing the data to developers with JSON over HTTP would have taken a significant amount of time to implement on top of a relational database, given the team size and skills. It was made almost trivial by using CouchDB, which handles the protocol details, allowing them to focus on the elements specific to the application. All they needed to put in place was the authentication/permissions logic; the data itself is untouched and goes straight through to CouchDB.

Half way through the project they needed to add a facility for the client to check for the availability of new messages. This was anticipated as a significant piece of server development, but the CouchDB `_changes` API was a perfect match and the only code they had to write was a simple function to select which updates are relevant.

Results

CouchDB allowed the team to build the Agora server quickly and resulted in a straightforward and clean codebase with an easy to extend data model (no migration scripts!). Now they are looking to expand their use of CouchDB by using it to also deliver their web client.

About Ocasta Labs

Ocasta Labs is focused on next generation web services, augmenting social networking developments and combining the power of emerging Internet standards with the capabilities of mobile operators to create compelling service offerings.

www.ocastalabs.com

About Vodafone

Vodafone Group Plc is the world's leading mobile telecommunications company, with a significant presence in Europe, the Middle East, Africa, Asia Pacific and the United States through the Company's subsidiary undertakings, joint ventures, associated undertakings and investments.

www.vodafone.com

Quote

Martin Higham, Founder of Ocasta Labs, says "This was the first time in over 20 years of software development that a new technology was simpler and less troublesome than I had expected."

Who we are



About CouchDB

Apache CouchDB bridges the cloud and the local network by making it simple to write web apps that can scale up to the datacenter and scale down for local use on a smartphone. The synchronization engine (inspired by Lotus Notes) allows sharing of data and applications across ad-hoc groups. Offline replication gives mobile devices better performance (lower latency) while saving battery life by avoiding radio usage. With offline replication solved in a simple way, application developers are free to focus on the code that matters

CouchDB is popular with developers because its document model is a closer fit for many domains, leading to less overall complexity. The JSON HTTP API allows developers to write dynamic database-backed applications without a middle tier: 2-tier CouchApps require only a web-browser and a CouchDB, and can be written by anyone with Ajax / jQuery experience. We firmly believe that empowering people to share data and custom applications at the edge of the network will lead to a more humane web.

Apache CouchDB is currently deployed by the BBC, Meebo, Assay Depot, Engine Yard, (among others) and is an integral part of the Ubuntu operating system.

Couchio

About Couchio

Couchio <http://couch.io> (founded by 3 CouchDB core committers) offers support, hosting, and professional training for CouchDB.

Contact CouchDB

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