CouchDB: The Definitive Guide

Three of CouchDB's creators show you how to use this document-oriented database as a standalone application framework or with high-volume, distributed applications. With its simple model for storing, processing, and accessing data, CouchDB is ideal for web applications that handle huge amounts of loosely structured data. That alone would stretch the limits of a relational database, yet CouchDB offers an open source solution that's reliable, scales easily, and responds quickly.

CouchDB works with self-contained data that has loose or ad-hoc connections. It's a model that fits many real-world items, such as contacts, invoices, and receipts, but you'll discover that this database can easily handle data of any kind. With this book, you'll learn how to work with CouchDB through its RESTful web interface, and you'll become familiar with key features such as simple document CRUD (create, read, update, delete), advanced MapReduce, deployment tuning, and more.

- Understand the basics of document-oriented storage and manipulation
- Interact with CouchDB entirely through HTTP, using its RESTful interface
- Model data as self-contained JSON documents
- Handle evolving data schemas naturally
- Query and aggregate data in CouchDB, using MapReduce views
- Replicate data between nodes
- Tune CouchDB for increased performance and reliability

“This is a great book. Clean, clear writing with helpful examples.”
—Shelley Powers
Author, Learning JavaScript

J. Chris Anderson is an Apache CouchDB committer and cofounder of Relaxed, Inc. Chris is obsessed with JavaScript CouchApps and bending the physics of the Web to give control back to users.

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Experience with Internet programming is recommended.

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Free online edition for 45 days with purchase of this book. Details on last page.
CouchDB: The Definitive Guide
For the Web, and all the people who helped me along the way. Thank you.
—J. Chris

Für Marita und Kalle.
—Jan

For my parents, God and Damien Katz.
—Noah
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*easy computing*
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Colophon

The animal on the cover of CouchDB: The Definitive Guide is a Pomeranian dog (Canis familiaris), a small variety of the generally larger German Spitz breed, named for the Baltic region of Pomerania (today spilt between northeastern Germany and northern Poland) where it was first bred.

Originally, Pomeranians were closer in size to their German Spitz relatives—weighing 30–50 pounds—and were bred as herding dogs because of their intelligence, energy, and loyalty. From the late 19th century, however, breeders began to favor increasingly smaller dogs, a move caused in large part by Queen Victoria’s affinity for that variety. Today, Pomeranians are classed as “toy dogs,” weighing only 4–7 pounds, and are particularly kept as small pets and show dogs.

The Pomeranian exhibits many of the physical and behavioral characteristics of its larger ancestors and relatives. It has a short, pointed muzzle, upright and pointed ears, a large bushy tail carried curled over the back, and is especially spirited and friendly. Pomeranians are also particularly noted for their double coat—a soft and dense undercoat and a long, straight and harshly textured outer coat—and come in a wide variety of colors, including white, black, brown, red, orange, sable, spotted, or any combination thereof. Because of their small size, Pomeranians are able to exercise sufficiently in small indoor spaces if taken for a daily walk, and consequently make excellent apartment pets.

The cover image is from Lydekker’s Royal Natural History. The cover font is Adobe ITC Garamond. The text font is Linotype Birka; the heading font is Adobe Myriad Condensed; and the code font is LucasFont’s TheSansMonoCondensed.