

Nosql With Mongodb In 24 Hours Sams Teach Yourself By Brad Dayley

MongoDB, a cross-platform NoSQL database, is the fastest-growing new database in the world. MongoDB provides a rich document-oriented structure with dynamic queries that you'll recognize from RDBMS offerings such as MySQL. In other words, this is a book about a NoSQL database that does not require the SQL crowd to re-learn how the database world works! MongoDB has reached 1.0 and boasts 50,000+ users. The community is strong and vibrant and MongoDB is improving at a fast rate. With scalable and fast databases becoming critical for today's applications, this book shows you how to install, administer and program MongoDB without pretending SQL never existed. Node.js supports both client and server side applications. It is based on JavaScript and is very fast in operation. These distinctive features made node.js as one of the most powerful framework in the Java Ecosystem. JavaScript alone allows you to build real-time and scalable mobile and web applications. With this e-book, you will explore more on the node.js framework and how to use it efficiently for web development. Average developers or beginners who struggle to understand node.js basics will find this book very helpful and productive. The book tried to put examples that simplify problems usually faced by the users like how asynchronous code works, what are modules, how big

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file can be read, node.js express, etc. You will find that lots of concepts that take a long time to master can be learned in a day or two. If this is your first interaction with node.js and don't want all sort of troubles that arise with the node, this edition is recommended. After going through this e-book, node.js will become an absolute pleasure.

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"The media elements for Sams Teach Yourself NoSQL
with MongoDB in 24 Hours demonstrate key points in the
text."--Resource description page.

Summary MongoDB in Action, Second Edition is a
completely revised and updated version. It introduces
MongoDB 3.0 and the document-oriented database
model. This perfectly paced book gives you both the big
picture you'll need as a developer and enough low-level
detail to satisfy system engineers. Purchase of the print
book includes a free eBook in PDF, Kindle, and ePub
formats from Manning Publications. About the
Technology This document-oriented database was built
for high availability, supports rich, dynamic schemas, and
lets you easily distribute data across multiple servers.
MongoDB 3.0 is flexible, scalable, and very fast, even

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with big data loads. About the Book MongoDB in Action, Second Edition is a completely revised and updated version. It introduces MongoDB 3.0 and the document-oriented database model. This perfectly paced book gives you both the big picture you'll need as a developer and enough low-level detail to satisfy system engineers. Lots of examples will help you develop confidence in the crucial area of data modeling. You'll also love the deep explanations of each feature, including replication, auto-sharding, and deployment. What's Inside Indexes, queries, and standard DB operations Aggregation and text searching Map-reduce for custom aggregations and reporting Deploying for scale and high availability Updated for Mongo 3.0 About the Reader Written for developers. No previous MongoDB or NoSQL experience is assumed. About the Authors After working at MongoDB, Kyle Banker is now at a startup. Peter Bakkum is a developer with MongoDB expertise. Shaun Verch has worked on the core server team at MongoDB. A Genentech engineer, Doug Garrett is one of the winners of the MongoDB Innovation Award for Analytics. A software architect, Tim Hawkins has led search engineering at Yahoo Europe. Technical Contributor: Wouter Thielen. Technical Editor: Mihalis Tsoukalos. Table of Contents PART 1 GETTING STARTED A database for the modern web MongoDB through the JavaScript shell Writing programs using MongoDB PART 2 APPLICATION DEVELOPMENT IN MONGODB Document-oriented data Constructing queries Aggregation Updates, atomic operations, and deletes PART 3 MONGODB MASTERY Indexing and query

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optimization Text search WiredTiger and pluggable storage Replication Scaling your system with sharding Deployment and administration

Manage, fine-tune, secure and deploy your MongoDB solution with ease with the help of practical recipes

About This Book Configure and deploy your MongoDB instance securely, without any hassle Optimize your database's query performance, perform scale-out operations, and make your database highly available

Practical guide with a recipe-based approach to help you tackle any problem in the application and database administration aspects of MongoDB

Who This Book Is For Database administrators with a basic understanding of the features of MongoDB and who want to professionally configure, deploy, and administer a MongoDB database, will find this book essential. If you are a MongoDB developer and want to get into MongoDB administration, this book will also help you.

What You Will Learn Install and deploy MongoDB in production Manage and implement optimal indexes Optimize monitoring in MongoDB Fine-tune the performance of your queries Debug and diagnose your database's performance Optimize database backups and recovery and ensure high availability Make your MongoDB instance scalable Implement security and user authentication features in MongoDB Master optimal cloud deployment strategies

In Detail MongoDB is a high-performance and feature-rich NoSQL database that forms the backbone of the systems that power many different organizations. Packed with many features that have become essential for many different types of

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software professional and incredibly easy to use, this cookbook contains more than 100 recipes to address the everyday challenges of working with MongoDB. Starting with database configuration, you will understand the indexing aspects of MongoDB. The book also includes practical recipes on how you can optimize your database query performance, perform diagnostics, and query debugging. You will also learn how to implement the core administration tasks required for high-availability and scalability, achieved through replica sets and sharding, respectively. You will also implement server security concepts such as authentication, user management, role-based access models, and TLS configuration. You will also learn how to back up and recover your database efficiently and monitor server performance. By the end of this book, you will have all the information you need—along with tips, tricks, and best practices—to implement a high-performance MongoDB solution. Style and approach This practical book follows a problem-solution approach to help you tackle any issues encountered while performing MongoDB administrative tasks. Each recipe is detailed, and explained in a very easy to understand manner

Sams Teach Yourself NoSQL with MongoDB in 24 Hours, Video Enhanced Edition

This book presents innovative ideas, cutting-edge findings, and novel techniques, methods, and applications in a broad range of cybersecurity and cyberthreat intelligence areas. As our society becomes smarter, there is a corresponding need to secure our cyberfuture. The book describes approaches and

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findings that are of interest to business professionals and governments seeking to secure our data and underpin infrastructures, as well as to individual users.

Congratulations! You completed the MongoDB application within the given tight timeframe and there is a party to celebrate your application's release into production. Although people are congratulating you at the celebration, you are feeling some uneasiness inside. To complete the project on time required making a lot of assumptions about the data, such as what terms meant and how calculations are derived. In addition, the poor documentation about the application will be of limited use to the support team, and not investigating all of the inherent rules in the data may eventually lead to poorly-performing structures in the not-so-distant future. Now, what if you had a time machine and could go back and read this book. You would learn that even NoSQL databases like MongoDB require some level of data modeling. Data modeling is the process of learning about the data, and regardless of technology, this process must be performed for a successful application. You would learn the value of conceptual, logical, and physical data modeling and how each stage increases our knowledge of the data and reduces assumptions and poor design decisions. Read this book to learn how to do data modeling for MongoDB applications, and accomplish these five objectives: Understand how data modeling contributes to the process of learning about the data, and is, therefore, a required technique, even when the resulting database is not relational. That is, NoSQL does not mean NoDataModeling! Know how NoSQL

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databases differ from traditional relational databases, and where MongoDB fits. Explore each MongoDB object and comprehend how each compares to their data modeling and traditional relational database counterparts, and learn the basics of adding, querying, updating, and deleting data in MongoDB. Practice a streamlined, template-driven approach to performing conceptual, logical, and physical data modeling.

Recognize that data modeling does not always have to lead to traditional data models! Distinguish top-down from bottom-up development approaches and complete a top-down case study which ties all of the modeling techniques together. This book is written for anyone who is working with, or will be working with MongoDB, including business analysts, data modelers, database administrators, developers, project managers, and data scientists. There are three sections: In Section I, Getting Started, we will reveal the power of data modeling and the tight connections to data models that exist when designing any type of database (Chapter 1), compare NoSQL with traditional relational databases and where MongoDB fits (Chapter 2), explore each MongoDB object and comprehend how each compares to their data modeling and traditional relational database counterparts (Chapter 3), and explain the basics of adding, querying, updating, and deleting data in MongoDB (Chapter 4). In Section II, Levels of Granularity, we cover Conceptual Data Modeling (Chapter 5), Logical Data Modeling (Chapter 6), and Physical Data Modeling (Chapter 7). Notice the “ing” at the end of each of these chapters. We focus on the process of building each of these

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models, which is where we gain essential business knowledge. In Section III, Case Study, we will explain both top down and bottom up development approaches and go through a top down case study where we start with business requirements and end with the MongoDB database. This case study will tie together all of the techniques in the previous seven chapters. Nike Senior Data Architect Ryan Smith wrote the foreword. Key points are included at the end of each chapter as a way to reinforce concepts. In addition, this book is loaded with hands-on exercises, along with their answers provided in Appendix A. Appendix B contains all of the book's references and Appendix C contains a glossary of the terms used throughout the text.

MongoDB has grown to become the de facto NoSQL database with millions of users, from small start-ups to Fortune 500 companies. It can solve problems that are considered difficult, if not impossible, for aging RDBMS technologies. Written for version 4 of MongoDB, this book is the easiest way to get started with MongoDB.

Get up to speed on the nuances of NoSQL databases and what they mean for your organization. This easy to read guide to NoSQL databases provides the type of no-nonsense overview and analysis that you need to learn, including what NoSQL is and which database is right for you. Featuring specific evaluation criteria for NoSQL databases, along with a look into the pros and cons of the most popular options, *NoSQL For Dummies*

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provides the fastest and easiest way to dive into the details of this incredible technology. You'll gain an understanding of how to use NoSQL databases for mission-critical enterprise architectures and projects, and real-world examples reinforce the primary points to create an action-oriented resource for IT pros. If you're planning a big data project or platform, you probably already know you need to select a NoSQL database to complete your architecture. But with options flooding the market and updates and add-ons coming at a rapid pace, determining what you require now, and in the future, can be a tall task. This is where NoSQL For Dummies comes in! Learn the basic tenets of NoSQL databases and why they have come to the forefront as data has outpaced the capabilities of relational databases Discover major players among NoSQL databases, including Cassandra, MongoDB, MarkLogic, Neo4J, and others Get an in-depth look at the benefits and disadvantages of the wide variety of NoSQL database options Explore the needs of your organization as they relate to the capabilities of specific NoSQL databases Big data and Hadoop get all the attention, but when it comes down to it, NoSQL databases are the engines that power many big data analytics initiatives. With NoSQL For Dummies, you'll go beyond relational databases to ramp up your enterprise's data architecture in no time.

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This book offers a comprehensive introduction to relational (SQL) and non-relational (NoSQL) databases. The authors thoroughly review the current state of database tools and techniques, and examine coming innovations. The book opens with a broad look at data management, including an overview of information systems and databases, and an explanation of contemporary database types: SQL and NoSQL databases, and their respective management systems The nature and uses of Big Data A high-level view of the organization of data management Data Modeling and Consistency Chapter-length treatment is afforded Data Modeling in both relational and graph databases, including enterprise-wide data architecture, and formulas for database design. Coverage of languages extends from an overview of operators, to SQL and and QBE (Query by Example), to integrity constraints and more. A full chapter probes the challenges of Ensuring Data Consistency, covering: Multi-User Operation Troubleshooting Consistency in Massive Distributed Data Comparison of the ACID and BASE consistency models, and more System Architecture also gets from its own chapter, which explores Processing of Homogeneous and Heterogeneous Data; Storage and Access Structures; Multi-dimensional Data Structures and Parallel Processing with MapReduce, among other topics. Post-Relational and NoSQL Databases The chapter on

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post-relational databases discusses the limits of SQL – and what lies beyond, including Multi-Dimensional Databases, Knowledge Bases and and Fuzzy Databases. A final chapter covers NoSQL Databases, along with Development of Non-Relational Technologies, Key-Value, Column-Family and Document Stores XML Databases and Graphic Databases, and more The book includes more than 100 tables, examples and illustrations, and each chapter offers a list of resources for further reading. SQL & NoSQL Databases conveys the strengths and weaknesses of relational and non-relational approaches, and shows how to undertake development for big data applications. The book benefits readers including students and practitioners working across the broad field of applied information technology. This textbook has been recommended and developed for university courses in Germany, Austria and Switzerland.

Data is getting bigger and more complex by the day, and so are your choices in handling it. Explore some of the most cutting-edge databases available - from a traditional relational database to newer NoSQL approaches - and make informed decisions about challenging data storage problems. This is the only comprehensive guide to the world of NoSQL databases, with in-depth practical and conceptual introductions to seven different technologies: Redis, Neo4J, CouchDB, MongoDB, HBase, Postgres, and

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DynamoDB. This second edition includes a new chapter on DynamoDB and updated content for each chapter. While relational databases such as MySQL remain as relevant as ever, the alternative, NoSQL paradigm has opened up new horizons in performance and scalability and changed the way we approach data-centric problems. This book presents the essential concepts behind each database alongside hands-on examples that make each technology come alive. With each database, tackle a real-world problem that highlights the concepts and features that make it shine. Along the way, explore five database models - relational, key/value, columnar, document, and graph - from the perspective of challenges faced by real applications. Learn how MongoDB and CouchDB are strikingly different, make your applications faster with Redis and more connected with Neo4J, build a cluster of HBase servers using cloud services such as Amazon's Elastic MapReduce, and more. This new edition brings a brand new chapter on DynamoDB, updated code samples and exercises, and a more up-to-date account of each database's feature set. Whether you're a programmer building the next big thing, a data scientist seeking solutions to thorny problems, or a technology enthusiast venturing into new territory, you will find something to inspire you in this book. What You Need: You'll need a *nix shell (Mac OS or Linux preferred, Windows users will

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need Cygwin), Java 6 (or greater), and Ruby 1.8.7 (or greater). Each chapter will list the downloads required for that database.

Learn how to leverage MongoDB with your Python applications, using the hands-on recipes in this book.

You get complete code samples for tasks such as making fast geo queries for location-based apps, efficiently indexing your user documents for social-graph lookups, and many other scenarios. This guide explains the basics of the document-oriented database and shows you how to set up a Python environment with it. Learn how to read and write to MongoDB, apply idiomatic MongoDB and Python patterns, and use the database with several popular Python web frameworks. You'll discover how to model your data, write effective queries, and avoid concurrency problems such as race conditions and deadlocks. The recipes will help you: Read, write, count, and sort documents in a MongoDB collection Learn how to use the rich MongoDB query language Maintain data integrity in replicated/distributed MongoDB environments Use embedding to efficiently model your data without joins Code defensively to avoid keyerrors and other bugs Apply atomic operations to update game scores, billing systems, and more with the fast accounting pattern Use MongoDB with the Pylons 1.x, Django, and Pyramid web frameworks NoSQL database usage is growing at a stunning

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50% per year, as organizations discover NoSQL's potential to address even the most challenging Big Data and real-time database problems. Every NoSQL database is different, but one is the most popular by far: MongoDB. Now, in just 24 lessons of one hour or less, you can learn how to leverage MongoDB's immense power. Each short, easy lesson builds on all that's come before, teaching NoSQL concepts and MongoDB techniques from the ground up. Sams Teach Yourself NoSQL with MongoDB in 24 Hours covers all this, and much more: Learning how NoSQL is different, when to use it, and when to use traditional RDBMSes instead Designing and implementing MongoDB databases of diverse types and sizes Storing and interacting with data via Java, PHP, Python, and Node.js/Mongoose Choosing the right NoSQL distribution model for your application Installing and configuring MongoDB Designing MongoDB data models, including collections, indexes, and GridFS Balancing consistency, performance, and durability Leveraging the immense power of Map-Reduce Administering, monitoring, securing, backing up, and repairing MongoDB databases Mastering advanced techniques such as sharding and replication Optimizing performance.

The need to handle increasingly larger data volumes is one factor driving the adoption of a new class of nonrelational “NoSQL” databases. Advocates of

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NoSQL databases claim they can be used to build systems that are more performant, scale better, and are easier to program. NoSQL Distilled is a concise but thorough introduction to this rapidly emerging technology. Pramod J. Sadalage and Martin Fowler explain how NoSQL databases work and the ways that they may be a superior alternative to a traditional RDBMS. The authors provide a fast-paced guide to the concepts you need to know in order to evaluate whether NoSQL databases are right for your needs and, if so, which technologies you should explore further. The first part of the book concentrates on core concepts, including schemaless data models, aggregates, new distribution models, the CAP theorem, and map-reduce. In the second part, the authors explore architectural and design issues associated with implementing NoSQL. They also present realistic use cases that demonstrate NoSQL databases at work and feature representative examples using Riak, MongoDB, Cassandra, and Neo4j. In addition, by drawing on Pramod Sadalage's pioneering work, NoSQL Distilled shows how to implement evolutionary design with schema migration: an essential technique for applying NoSQL databases. The book concludes by describing how NoSQL is ushering in a new age of Polyglot Persistence, where multiple data-storage worlds coexist, and architects can choose the technology best optimized

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for each type of data access.

MongoDB gives flexibility in compare to RDBMS. It has features like dynamic schemas, storage for large volume data, scaling database architecture, real-time data reporting, data sharding, and so on. It enables to develop application faster. To address all these features in a concise manner, this e-book is created. This e-book has explained features of MongoDB, that is important from the point of Big data analytics. It makes clear the confusion over MySQL and NoSQL working pattern. It has accommodated all the topics on MongoDB with examples. It guides you right through setting up MongoDB environment to security requirements. The book is too small, but all important aspect of MongoDB is covered. The examples and code are explained in a manner that beginners can easily absorb the content. The book has also illustrated various shell commands to access MongoDB. Not only that, but the user will also explore about JSON document and creating queries in MongoDB. The book can be used for further reference for application build on MongoDB Java or MongoDB Python. Minimum price range and maximum deliverable is the main plus point of this e-book.

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Create a MongoDB cluster that will grow to meet the

needs of your application. With this short and

concise book, you'll get guidelines for setting up and

using clusters to store a large volume of data, and

learn how to access the data efficiently. In the

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process, you'll understand how to make your application work with a distributed database system. Scaling MongoDB will help you: Set up a MongoDB cluster through sharding Work with a cluster to query and update data Operate, monitor, and backup your cluster Plan your application to deal with outages By following the advice in this book, you'll be well on your way to building and running an efficient, predictable distributed system using MongoDB. NoSQL database usage is growing at a stunning 50% per year, as organizations discover NoSQL's potential to address even the most challenging Big Data and real-time database problems. Every NoSQL database is different, but one is the most popular by far: MongoDB. Now, in just 24 lessons of one hour or less, you can learn how to leverage MongoDB's immense power. Each short, easy lesson builds on all that's come before, teaching NoSQL concepts and MongoDB techniques from the ground up. Sams Teach Yourself NoSQL with MongoDB in 24 Hours covers all this, and much more: Learning how NoSQL is different, when to use it, and when to use traditional RDBMSes instead Designing and implementing MongoDB databases of diverse types and sizes Storing and interacting with data via Java, PHP, Python, and Node.js/Mongoose Choosing the right NoSQL distribution model for your application Installing and configuring MongoDB Designing MongoDB data models, including

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collections, indexes, and GridFS Balancing consistency, performance, and durability Leveraging the immense power of Map-Reduce Administering, monitoring, securing, backing up, and repairing MongoDB databases Mastering advanced techniques such as sharding and replication Optimizing performance

A hands-on guide to leveraging NoSQL databases NoSQL databases are an efficient and powerful tool for storing and manipulating vast quantities of data. Most NoSQL databases scale well as data grows. In addition, they are often malleable and flexible enough to accommodate semi-structured and sparse data sets. This comprehensive hands-on guide presents fundamental concepts and practical solutions for getting you ready to use NoSQL databases. Expert author Shashank Tiwari begins with a helpful introduction on the subject of NoSQL, explains its characteristics and typical uses, and looks at where it fits in the application stack. Unique insights help you choose which NoSQL solutions are best for solving your specific data storage needs. Professional NoSQL: Demystifies the concepts that relate to NoSQL databases, including column-family oriented stores, key/value databases, and document databases. Delves into installing and configuring a number of NoSQL products and the Hadoop family of products. Explains ways of storing, accessing, and querying data in NoSQL databases through

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examples that use MongoDB, HBase, Cassandra, Redis, CouchDB, Google App Engine Datastore and more. Looks at architecture and internals. Provides guidelines for optimal usage, performance tuning, and scalable configurations. Presents a number of tools and utilities relating to NoSQL, distributed platforms, and scalable processing, including Hive, Pig, RRDtool, Nagios, and more.

Getting started with MongoDB is easy, but once you begin building applications with it, you'll face some complex issues. What are the tradeoffs between normalized and denormalized data? How do you handle replica set failure and failover? This collection of MongoDB tips, tricks, and hacks helps you resolve issues with everything from application design and implementation to data safety and monitoring. You get specific guidance in five topic areas directly from engineers at 10gen, the company that develops and supports this open source database:

- Application Design Tips: What to keep in mind when designing your schema
- Implementation Tips: Programming applications against MongoDB
- Optimization Tips: Speeding up your applications
- Data Safety Tips: Using replication and journaling to keep data safe—without sacrificing too much performance
- Administration Tips: How to configure MongoDB and keep it running smoothly

Two years since its initial release, Redis already has an impressive list of adopters, including Engine

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Yard, GitHub, Craigslist, and Digg. This open source data structure server is built for speed and flexibility, making it ideal for many applications. If you're using Redis, or considering it, this concise cookbook provides recipes for a variety of issues you're likely to face. Each recipe solves a specific problem, and provides an in-depth discussion of how the solution works. You'll discover that Redis, while simple in nature, offers extensive functionality for manipulating and storing data. Learn when it makes sense to use Redis Explore several methods for installing Redis Connect to Redis in a number of ways, ranging from the command line to popular languages such as Python and Ruby Solve a range of needs, from linked datasets to analytics Handle backups, sharding, datasets larger than available memory, and many other tasks

HBase data storage technology is rapidly adopted by traditional RDMS users. Unlike RDMS, where scaling the server vertically for a huge data is a big challenge. With HBase, you can do this easily. It allows you to integrate with Hadoop's MapReduce framework for massively parallelized data processing jobs. Many expert and beginners are asking for a point-to-point guide that helps them to get a complete insight on HBase working. This book will answer all their queries and give them a complete tour of HBase technology. In this edition, you will begin with some very basic concept like HBase's

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architecture, including the storage format, write-ahead log, background processes, and some of the advance topics. You will also learn about accessing HBase with native Java clients, how to tune clusters, design schemas, copy tables, etc. So far if tracking other resources for HBase have disappointed you, you must try this e-book. It is cheap, easy to comprehend and concise in its content. The examples and images are an additional benefit of this book. While to enhance your knowledge pool for related topics, more referrals and links are provided.

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Mining big data requires a deep investment in people

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and time. How can you be sure you're building the right models? With this hands-on book, you'll learn a flexible toolset and methodology for building effective analytics applications with Hadoop. Using lightweight tools such as Python, Apache Pig, and the D3.js library, your team will create an agile environment for exploring data, starting with an example application to mine your own email inboxes. You'll learn an iterative approach that enables you to quickly change the kind of analysis you're doing, depending on what the data is telling you. All example code in this book is available as working Heroku apps.

Create analytics applications by using the agile big data development methodology Build value from your data in a series of agile sprints, using the data-value stack Gain insight by using several data structures to extract multiple features from a single dataset Visualize data with charts, and expose different aspects through interactive reports Use historical data to predict the future, and translate predictions into action Get feedback from users after each sprint to keep your project on track

Get to grips with a new technology, understand what it is and what it can do for you, and then get to work with the most important features and tasks.

MongoDB Starter is a fast and practical guide designed to help you start developing high-performance and scalable applications using MongoDB. MongoDB Starter is ideal for developers

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who are new to MongoDB and who need a no-nonsense guide on how to start working with it. No knowledge of MongoDB is required to follow this book, but some knowledge of C++ would be helpful. The "one-size-fits-all" thinking regarding traditional RDBMSs has been challenged in the last few years by the emergence of diversified NoSQL databases. More than 120 NoSQL databases are now available in the market, and the market leader by far is MongoDB. With so many companies opting for MongoDB as their NoSQL database of choice, there's a need for a practical how-to combined with expert advice for getting the most out of the software. Beginning with a short introduction to the basics of NoSQL databases, MongoDB experts Navin Sabharwal and Shankatala Gupta Edward introduce readers to MongoDB – the leading document based NoSQL database, acquainting them step by step with all aspects of MongoDB. They cover the data model, underlying architecture, how to code using Mongo Shell, and administration of the MongoDB platform, among other topics. The book also provides clear guidelines and practical examples for architecting and developing applications using the MongoDB platform and deploying them. Database developers, architects, and database administrators will find useful information covering all aspects of the MongoDB platform and how to put it to use practically. Practical

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Guide to MongoDB provides readers with: A solid understanding of NoSQL databases An understanding of how to get started with MongoDB Methodical coverage of the architecture, development, and administration of MongoDB A plethora of "How to's" enabling you to use the technology most efficiently to solve the problems you face Practical MongoDB is for those just starting to learning to work with NoSQL databases in general and MongoDB in particular. Skills in these areas are in demand, making this book essential reading for those who want to work more productively or break into big data work. It will prove equally useful for entrepreneurs and others who like to work with new technologies.

Manage the huMONGOus amount of data collected through your web application with MongoDB. This authoritative introduction—written by a core contributor to the project—shows you the many advantages of using document-oriented databases, and demonstrates how this reliable, high-performance system allows for almost infinite horizontal scalability. This updated second edition provides guidance for database developers, advanced configuration for system administrators, and an overview of the concepts and use cases for other people on your project. Ideal for NoSQL newcomers and experienced MongoDB users alike, this guide provides numerous real-world schema

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design examples. Get started with MongoDB core concepts and vocabulary Perform basic write operations at different levels of safety and speed Create complex queries, with options for limiting, skipping, and sorting results Design an application that works well with MongoDB Aggregate data, including counting, finding distinct values, grouping documents, and using MapReduce Gather and interpret statistics about your collections and databases Set up replica sets and automatic failover in MongoDB Use sharding to scale horizontally, and learn how it impacts applications Delve into monitoring, security and authentication, backup/restore, and other administrative tasks This comprehensive guide book begins by explaining what makes MongoDB unique. A series of tutorials designed for MongoDB mastery then leads into detailed examples for leveraging MongoDB in e-commerce, social networking, analytics, and other common applications.

? This book is a comprehensive guide to MongoDB for application developers. The book begins by explaining what makes MongoDB unique and describing its ideal use cases. A series of chapters designed for MongoDB mastery then leads into detailed examples for leveraging MongoDB in e-commerce, social networking, analytics, and other common applications. Numerous examples will help you develop confidence in the crucial area of data

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modeling. You'll also love the deep explanations of each feature, including replication, auto-sharding, and deployment. ? This is well-organized book which provides both the proper explanation you'll need as a student developer and enough detail to satisfy a developer. Several examples will help you develop confidence in the crucial area of data modeling. You'll also love the deep explanations of each feature, including replication, auto-sharding, and deployment. ? The first chapters cover a lot of theory but later you dive into practical hands-on experience setting up and configuring MongoDB from scratch. This is crucial if you want to truly understand the database environment. ? This book really does cover just the MongoDB, simply in depth so it also won't take you very far. Throughout each chapter you'll learn tons of new techniques for using MongoDB objects and the basic CRUD techniques for DB connections. Later chapters even offer source code from multiple languages like Java, Python, and PHP. This lets you see how applications can scale using Mongo regardless of the backend language. You can learn sharding and replication for scaling databases. ? This book is very compact with less than 100 pages. But it's also incredibly detailed and wastes no time diving right into the action and ease of use.. ? What's inside: - NoSQL, Architecture of MongoDB - Standard DB operations, Indexes, queries - Map-reduce for custom aggregations and reporting -

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Java, Python and PHP Connectivity - Schema design patterns - Deploying for scale and high availability.

You can choose several data access frameworks when building Java enterprise applications that work with relational databases. But what about big data? This hands-on introduction shows you how Spring Data makes it relatively easy to build applications across a wide range of new data access technologies such as NoSQL and Hadoop. Through several sample projects, you'll learn how Spring Data provides a consistent programming model that retains NoSQL-specific features and capabilities, and helps you develop Hadoop applications across a wide range of use-cases such as data analysis, event stream processing, and workflow. You'll also discover the features Spring Data adds to Spring's existing JPA and JDBC support for writing RDBMS-based data access layers. Learn about Spring's template helper classes to simplify the use of database-specific functionality Explore Spring Data's repository abstraction and advanced query functionality Use Spring Data with Redis (key/value store), HBase (column-family), MongoDB (document database), and Neo4j (graph database) Discover the GemFire distributed data grid solution Export Spring Data JPA-managed entities to the Web as RESTful web services Simplify the development of HBase applications, using a lightweight object-mapping

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framework Build example big-data pipelines with Spring Batch and Spring Integration

The Easy, Common-Sense Guide to Solving Real Problems with NoSQL The Mere Mortals® tutorials have earned worldwide praise as the clearest, simplest way to master essential database technologies. Now, there's one for today's exciting new NoSQL databases. NoSQL for Mere Mortals guides you through solving real problems with NoSQL and achieving unprecedented scalability, cost efficiency, flexibility, and availability. Drawing on 20+ years of cutting-edge database experience, Dan Sullivan explains the advantages, use cases, and terminology associated with all four main categories of NoSQL databases: key-value, document, column family, and graph databases. For each, he introduces pragmatic best practices for building high-value applications. Through step-by-step examples, you'll discover how to choose the right database for each task, and use it the right way. Coverage includes --Getting started: What NoSQL databases are, how they differ from relational databases, when to use them, and when not to Data management principles and design criteria: Essential knowledge for creating any database solution, NoSQL or relational --Key-value databases: Gaining more utility from data structures --Document databases: Schemaless databases, normalization and denormalization, mutable documents, indexing, and

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design patterns --Column family databases: Google's BigTable design, table design, indexing, partitioning, and Big Data Graph databases: Graph/network modeling, design tips, query methods, and traps to avoid Whether you're a database developer, data modeler, database user, or student, learning NoSQL can open up immense new opportunities. As thousands of database professionals already know, For Mere Mortals is the fastest, easiest route to mastery.

This book constitutes the proceedings of the 11th European Workshop on Performance Engineering, EPEW 2014, held in Florence, Italy, in September 2014. The 18 full papers presented in this volume were carefully reviewed and selected from 30 submissions. The papers are organized in topical sections named: cloud performance modelling; queueing and fluid models; performance of computation and programming; fitting; urban traffic modelling; decision making; and Markovian models, above and beyond.

Node.js, MongoDB and Angular Web Development The definitive guide to using the MEAN stack to build web applications Node.js is a leading server-side programming environment, MongoDB is the most popular NoSQL database, and Angular is the leading framework for MVC-based front-end development. Together, they provide an easy-to-implement, fully integrated web development stack that allows web

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programmers to create high-performance sites and applications built completely in JavaScript, from server to client. Updated for Angular 2, Angular 4, and subsequent versions, this new edition of Node.js, MongoDB and Angular Web Development shows you how to integrate these three technologies into complete working solutions. It begins with concise, crystal-clear tutorials on each technology and then quickly moves on to building common web applications. You'll learn how to use Node.js and MongoDB to build more scalable, high-performance sites, how to leverage Angular's innovative MVC approach to structure more effective pages and applications, and how to use all three together to deliver outstanding next-generation Web solutions. Implement a highly scalable and dynamic web server using Node.js and Express Implement a MongoDB data store for your web applications Access and interact with MongoDB from Node.js JavaScript code Learn the basics of TypeScript Define custom Angular directives that extend the HTML language Build server-side web services in JavaScript Implement client-side services that can interact with the Node.js web server Build dynamic browser views that provide rich user interaction Add authenticated user accounts and nested comment components to your web applications and pages Contents at a Glance Part I: Getting Started 1 Introducing the Node.js-to-Angular Stack 2 JavaScript Primer Part II:

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Learning Node.js 3 Getting Started with Node.js 4 Using Events, Listeners, Timers, and Callbacks in Node.js 5 Handling Data I/O in Node.js 6 Accessing the File System from Node.js 7 Implementing HTTP Services in Node.js 8 Implementing Socket Services in Node.js 9 Scaling Applications Using Multiple Processors in Node.js 10 Using Additional Node.js Modules Part III: Learning MongoDB 11 Understanding NoSQL and MongoDB 12 Getting Started with MongoDB 13 Getting Started with MongoDB and Node.js 14 Manipulating MongoDB Documents from Node.js 15 Accessing MongoDB from Node.js 16 Using Mongoose for Structured Schema and Validation 17 Advanced MongoDB Concepts Part IV: Using Express to Make Life Easier 18 Implementing Express in Node.js 19 Implementing Express Middleware Part V: Learning Angular 20 Jumping into TypeScript 21 Getting Started with Angular 22 Angular Components 23 Expressions 24 Data Binding 25 Built-in Directives Part VI: Advanced Angular 26 Custom Directives 27 Events and Change Detection 28 Implementing Angular Services in Web Applications 29 Creating Your Own Custom Angular Services 30 Having Fun with Angular

The definitive guide to building JavaScript-based Web applications from server to browser Node.js, MongoDB, and AngularJS are three new web development technologies that together provide an easy to implement, fully integrated web

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development stack. Node.js is a leading server-side programming environment, MongoDB is the most popular NoSQL database, and AngularJS is quickly becoming the leading framework for MVC-based front-end development. Together they allow web programmers to create high-performance sites and applications built completely in JavaScript, from server to client. Node.js, MongoDB and AngularJS Web Development is a complete guide for web programmers who want to integrate these three technologies into full working solutions. It begins with concise, crystal-clear tutorials on each of the three technologies and then quickly moves on to building several common web applications. Readers will learn how to use Node.js and MongoDB to build more scalable, high-performance sites, how to leverage AngularJS's innovative MVC approach to structure more effective pages and applications, and how to use all three together to deliver outstanding next-generation Web solutions.

Whether you're building a social media site or an internal-use enterprise application, this hands-on guide shows you the connection between MongoDB and the business problems it's designed to solve. You'll learn how to apply MongoDB design patterns to several challenging domains, such as ecommerce, content management, and online gaming. Using Python and JavaScript code examples, you'll discover how MongoDB lets you scale your data model while simplifying the development process. Many businesses launch NoSQL databases without understanding the techniques for using their features most effectively. This book demonstrates the benefits of document embedding, polymorphic schemas, and other MongoDB patterns for tackling specific big data use cases, including: Operational intelligence: Perform real-time analytics of business data Ecommerce: Use MongoDB as a product catalog master or inventory management system

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Content management: Learn methods for storing content nodes, binary assets, and discussions
Online advertising networks: Apply techniques for frequency capping ad impressions, and keyword targeting and bidding
Social networking: Learn how to store a complex social graph, modeled after Google+
Online gaming: Provide concurrent access to character and world data for a multiplayer role-playing game

"Now, in just 24 lessons of one hour or less, you can learn how to leverage MongoDB's immense power. Each short, easy lesson builds on all that's come before, teaching NoSQL concepts and MongoDB techniques from the ground up."--

This book discusses the advanced databases for the cloud-based application known as NoSQL. It will explore the recent advancements in NoSQL database technology. Chapters on structured, unstructured and hybrid databases will be included to explore bigdata analytics, bigdata storage and processing. The book is likely to cover a wide range of topics such as cloud computing, social computing, bigdata and advanced databases processing techniques.

Annotation With the rise of Web 2.0, the need for a highly scalable database, capable of storing diverse user-generated content is increasing. MongoDB, an open-source, non-relational database has stepped up to meet this demand and is being used in some of the most popular websites in the world. MongoDB is one of the NoSQL databases which is gaining popularity for developing PHP Web 2.0

applications. PHP and MongoDB Web Development Beginners Guide is a fast-paced, hands-on guide to get started with web application development using PHP and MongoDB. The book follows a Code first, explain later approach, using practical examples in PHP to demonstrate unique features of MongoDB. It does not overwhelm you with information (or starve you of it), but gives you enough to get a

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solid practical grasp on the concepts. The book starts by introducing the underlying concepts of MongoDB. Each chapter contains practical examples in PHP that teach specific features of the database. The book teaches you to build a blogging application, handle user sessions and authentication, and perform aggregation with MapReduce. You will learn unique MongoDB features and solve interesting problems like real-time analytics, location-aware web apps etc. You will be guided to use MongoDB alongside MySQL to build a diverse data back-end. With its concise coverage of concepts and numerous practical examples, PHP and MongoDB Web Development Beginners Guide is the right choice for the PHP developer to get started with learning MongoDB.

Leverage the power of MongoDB 4.x to build and administer fault-tolerant database applications

Key Features

- Master the new features and capabilities of MongoDB 4.x
- Implement advanced data modeling, querying, and administration techniques in MongoDB
- Includes rich case-studies and best practices followed by expert MongoDB developers

Book Description

MongoDB is the best platform for working with non-relational data and is considered to be the smartest tool for organizing data in line with business needs. The recently released MongoDB 4.x supports ACID transactions and makes the technology an asset for enterprises across the IT and fintech sectors. This book provides expertise in advanced and niche areas of managing databases (such as modeling and querying databases) along with various administration techniques in MongoDB, thereby helping you become a successful MongoDB expert. The book helps you understand how the newly added capabilities function with the help of some interesting examples and large datasets. You will dive deeper into niche areas such as high-performance configurations, optimizing SQL statements, configuring large-

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scale sharded clusters, and many more. You will also master best practices in overcoming database failover, and master recovery and backup procedures for database security. By the end of the book, you will have gained a practical understanding of administering database applications both on premises and on the cloud; you will also be able to scale database applications across all servers. What you will learn

- Perform advanced querying techniques such as indexing and expressions
- Configure, monitor, and maintain a highly scalable MongoDB environment
- Master replication and data sharding to optimize read/write performance
- Administer MongoDB-based applications on premises or on the cloud
- Integrate MongoDB with big data sources to process huge amounts of data
- Deploy MongoDB on Kubernetes containers
- Use MongoDB in IoT, mobile, and serverless environments

Who this book is for This book is ideal for MongoDB developers and database administrators who wish to become successful MongoDB experts and build scalable and fault-tolerant applications using MongoDB. It will also be useful for database professionals who wish to become certified MongoDB professionals. Some understanding of MongoDB and basic database concepts is required to get the most out of this book.

Get the most out of MongoDB using a problem-solution approach. This book starts with recipes on the MongoDB query language, including how to query various data structures stored within documents. These self-contained code examples allow you to solve your MongoDB problems without fuss. MongoDB Recipes describes how to use advanced querying in MongoDB, such as indexing and the aggregation framework. It demonstrates how to use the Compass function, a GUI client interacting with MongoDB, and how to apply data modeling to your MongoDB application. You'll see recipes on the latest features of

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MongoDB 4 allowing you to manage data in an efficient manner using MongoDB. What You Will Learn Work with the MongoDB document model Design MongoDB schemas Use the MongoDB query language Harness the aggregation framework Create replica sets and sharding in MongoDB Who This Book Is For Developers and professionals who work with MongoDB.

The world of NoSQL databases is constantly evolving. Many applications are adopting these new technologies to provide developers with increasingly powerful tools. One of their prominent hallmarks is the freedom from having to define a database model ahead - a feature known as being "schemaless". MongoDB, the market leader in NoSQL document databases, has made this feature its strong point. An unprecedented level of flexibility makes MongoDB an incredibly powerful tool, but may likewise compromise performance, if not properly tamed. The design of database models, therefore, becomes fundamental to achieving the best performance. In this book we will analyze some use cases and identify optimal modeling patterns, by taking into account the constraints of the application context. We will pinpoint the benefits, but also the tradeoffs that come with each pattern. These patterns will become our tools of the trade for taking full advantage of the power and flexibility of this document database, and building efficient applications.

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