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Nota di contenuto	Cover; Copyright; Credits; About the Author; About the Reviewers; www.PacktPub.com; Table of Contents; Preface; Chapter 1: Getting Started with Neo4j; Graphs and their utilities; Introducing NoSQL databases; Dynamic schemas; Automatic sharding; Built-in caching; Replication; Types of NoSQL databases; Key-value stores; Column family stores; Document databases; Graph databases; Graph compute engines; The Neo4j graph database; ACID compliance; Characteristics of Neo4j; The basic CRUD operations; Neo4j setup and configurations; Modes of setup - the embedded mode; Modes of setup - the server mode Neo4j high availabilityMachine #1 - neo4j-01.local; Instance #2 - neo4j-02.local; Instance #3 - neo4j-03.local; Configure Neo4j for Amazon clusters; Cloud deployment with Azure; Summary; Chapter 2: Querying and Indexing in Neo4j; The Neo4j interface; Running Cypher queries; Visualization of results; Introduction to Cypher; Cypher graph operations; Cypher clauses; More useful clauses; Advanced Cypher tricks; Query optimizations; Graph model optimizations; Gremlin - an overview; Indexing in Neo4j; Manual and automatic indexing; Schema-based indexing; Indexing benefits and trade-offs Migration techniques for SQL usersHandling dual data stores; Analyzing the model; Initial import; Keeping data in sync; The result; Useful code

snippets; Importing data to Neo4j; Export data from Neo4j; Summary; Chapter 3: Efficient Data Modeling with Graphs; Data models; Aggregated data model; Connected data models; Property graphs; Design constraints in Neo4j; Graph modeling techniques; Aggregation in graphs; Graphs for adjacency lists; Materialized paths; Modeling with nested sets; Flattening with ordered field names; Schema design patterns; Hyper edges; Implementing linked lists
Complex similarity computationsRoute generation algorithms; Modeling across multiple domains; Summary; Chapter 4: Neo4j for High-Volume Applications; Graph processing; Big data and graphs; Processing with Hadoop or Neo4j; Managing transactions; Deadlock handling; Uniqueness of entities; Events for transactions; The graphalgo package; Introduction to Spring Data Neo4j; Summary; Chapter 5: Testing and Scaling Neo4j Applications; Testing Neo4j applications; Unit testing; Using the Java API; GraphUnit-based unit testing; Unit testing an embedded database; Unit testing a Neo4J server Performance testingBenchmarking performance with Gatling; Scaling Neo4j applications; Summary; Chapter 6: Neo4j Internals; Introduction to Neo4j internals; Working of your code; Node and relationship management; Implementation specifics; Storage for properties; The storage structure; Migrating to the new storage; Caching internals; Cache types; AdaptiveCacheManager; Transactions; The Write Ahead log; Detecting deadlocks; RWLock; RAGManager; LockManager; Commands; High availability; HA and the need for a master; The master election; Summary; Chapter 7: Administering Neo4j
Interfacing with the tools and frameworks

Sommario/riassunto

If you are a professional or enthusiast who has a basic understanding of graphs or has basic knowledge of Neo4j operations, this is the book for you. Although it is targeted at an advanced user base, this book can be used by beginners as it touches upon the basics. So, if you are passionate about taming complex data with the help of graphs and building high performance applications, you will be able to get valuable insights from this book.
