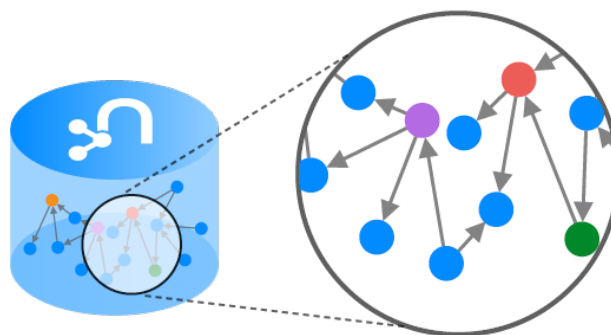




Neo4j Graph Database

The Fastest Path to Graph Productivity



As the most trusted, scalable, high-performance graph data platform on the market, Neo4j empowers developers and data scientists to create intelligence-powered solutions. Now you can overcome the most complex data challenges with advanced applications that harness the rich relationships in your data.

The Neo4j Graph Database is the heart of the [Neo4j Graph Data Platform](#). Neo4j is the most widely deployed graph database, serving enterprise use cases across industries, including life sciences, utilities, financial services, cybersecurity, and [so many more](#).

Key Benefits of Neo4j Graph Database

Graph-Native Scale

Neo4j's high-performance, ACID-compliant distributed cluster architecture scales with your data and your business needs, minimizing cost and hardware while maximizing performance across connected datasets without compromising data integrity.

With Neo4j, businesses achieve robust transactional guarantees and performance across billions of nodes and trillions of relationships, with query response time in milliseconds. Analytical workloads can achieve unlimited scale-out for reads with a single core server and as many read replicas as desired. Scale reads horizontally 1000x simply by adding more read replicas.

The Neo4j Graph Database gives you unlimited horizontal scalability by enabling you to divide your graph into shards. Shards partition data onto different servers as desired based on business needs, geography, or latency for users.

“Bet365's Risk Management Team quickly concluded that the technology would comfortably provide the scalability demanded by its applications for the foreseeable future. Our graph is over 1.5 terabytes yet it is still extremely fast.”

Richard Burton,
Head of Management Information Systems,
Hillside Technology Ltd.

Federated native graph queries analyze the graph as a logical whole using [Neo4j Fabric](#).

Superior Performance

Graph databases are like rocket fuel for intelligent applications, delivering context fast, even for the deepest queries. Neo4j's native graph database delivers constant high-performance queries, no matter how large your graph is.

Relationship and relationship property indexes triple the speed of deep queries. Relationship chain locks enable faster transaction writes to create, delete, and update dense nodes (nodes with many relationships).

Operational Flexibility

Business requirements and priorities change – and Neo4j is built to keep pace. Neo4j pioneered the property graph model; the model you sketch on a whiteboard is the same as the data stored in the database. This intuitive, concept-first approach spurs rapid development of intelligence-driven applications.



As business requirements change, modify the schema or database without disrupting or remodeling current data.

Designed for the Cloud

Neo4j runs everywhere: on-premises and across public, private, and hybrid clouds. About 90 percent of enterprise customers deploy Neo4j in the cloud. Neo4j is designed for ease of operations in cloud architecture so you can build, test, and deploy faster.

With [Neo4j Aura](#), the fully managed cloud offering, developers get started immediately, with zero administration. Neo4j Aura scales to meet the most demanding production workloads. Neo4j makes application development, deployment, and DevOps even simpler with Kubernetes integration and Helm Charts, as well as simplified server-side routing.

Fine-Grained Security

Built for the graph, Neo4j includes enterprise-grade database security that guarantees transactions with zero data loss. Neo4j has all the security features that enterprises demand: LDAP/Directory services integration, security logging, and strong encryption to protect data in transit and at rest.

Role-based access control enables fine-grained governance of all nodes, properties, and relationships. Securing data at the database level empowers developers to focus on the functionality of their intelligent applications. It also allows organizations to create logical security roles for all users.

Developer Friendly

Neo4j has the largest active developer community, with over 220,000 members. The Cypher graph query language is compact and intuitive, requiring 10x less code than SQL. Cypher delivers massive productivity gains with a minimal learning curve. Features like indexes on node and relationship types and properties make complex Cypher queries even faster.

A combination of client- and server-side routing makes it easy for DevOps teams to roll out Neo4j with load balancers, orchestration platforms like Kubernetes, application stacks like GRANDstack, and client tools like [Neo4j Bloom](#), [Neo4j Browser](#), and Jupyter Notebooks.

FEATURES

- ✓ ACID compliant for the most demanding transactional applications
- ✓ Distributed, high-performance native graph architecture
- ✓ DevOps in the cloud with Kubernetes integration and Helm Charts
- ✓ Smart IO scheduling for faster startup times and improved TCO
- ✓ Relationship chain locks for faster transaction throughput
- ✓ Relationship property indexes for fast, scalable query performance
- ✓ Server-side routing for simplified networking
- ✓ Neo4j Fabric for sharding and federated queries
- ✓ Parallelized backup and restore for faster backup and recovery times
- ✓ Scale-out capacity for read-intensive analytical workloads
- ✓ Sensitive data obfuscation in all logs for enhanced security

Neo4j is the leader in graph database technology. As the world's most widely deployed graph database, we help global brands – including Comcast, NASA, UBS, and Volvo Cars – to reveal and predict how people, processes and systems are interrelated. Using this relationships-first approach, applications built with Neo4j tackle connected data challenges such as analytics and artificial intelligence, fraud detection, real-time recommendations, and knowledge graphs. Find out more at neo4j.com.

Questions about Neo4j?

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