ORIENTDB-ENGINEERED FOR GREATNESS FROM GROUND UP

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Abstract

A NoSQL graph database that recently gained lot of attention due to its performances and features which, combined together, offer a tool that is by far different from any other product in the DBMS ecosystem. This poster is designed to easily understand the features of OrientDB.

Introduction

OrientDB is a Java-written NoSQL database Management system and is also incredibly popular among developers.

Features

- Fast to install
- Support for SQL queries
- Native support for HTTP, RESTful protocol JSON(libraries or components)
- Runs anywhere : Linux, Windows, OS X
- Language : Java

OrientDB has a multi-model graph engine and it supports different models: graph, document, object and key/value. This database has numerous applications, including fraud prevention and banking.

What are Graph Databases?

Graph Databases are NoSQL databases which use the graph data model comprised of vertices, which is an entity such as a person, place, object or relevant piece of data and edges, which represent the relationship between two nodes or vertices.

Features

PERFORMANCE

OrientDB is the world's fastest graph database. An independent benchmark study by IBM and the Tokyo Institute Technology showed that OrientDB is 10x faster than Neo4j on graph operations among all other workloads. Drive competitive advantage and accelerate innovation with new revenue streams.

SCALABILITY

Avoid the crashes and bottlenecks master-slave databases are known for and ensure a consistent end-user experience with a highly scalable open source database built to collect, process, and analyze every-increasing amounts of data in the real time.

SECURITY

Keeps your intellectual property and other mission-critical data private with a fully encrypted database that's protected by a secure proprietary algorithm.

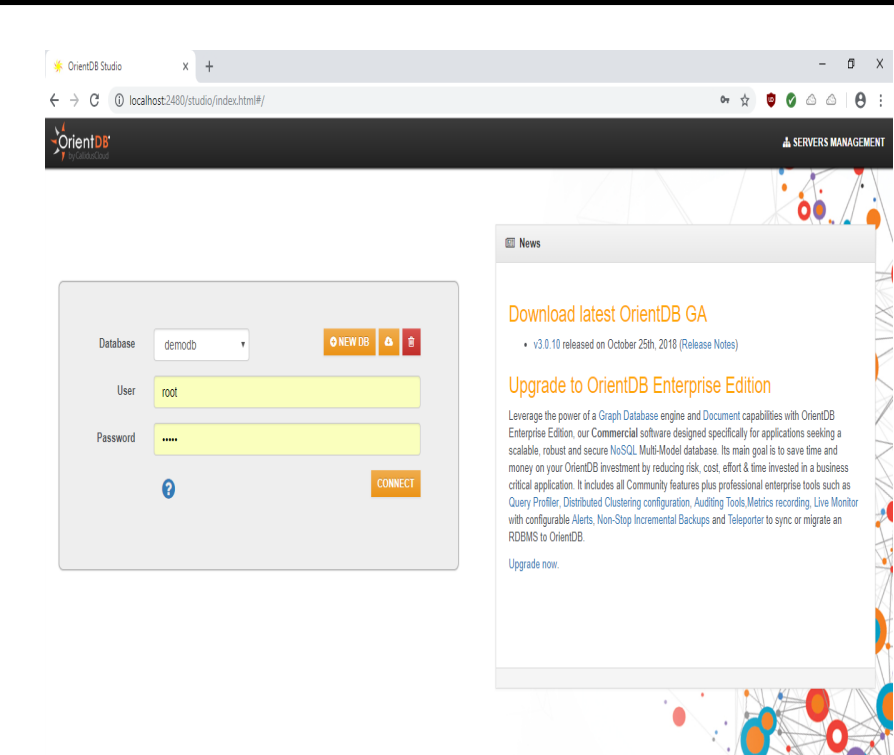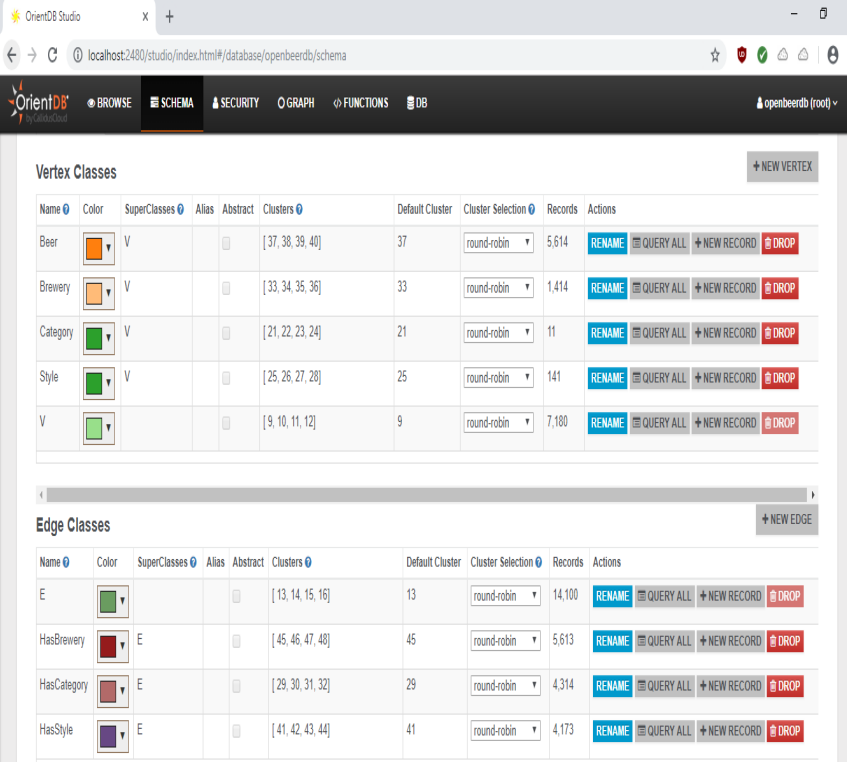| OrientDB vs. MongoDB	OrientDB vs. Neo4j
Support atomic operations as well as ACID.	Work 10x faster on graph operations among all the workloads.
Handles relationship faster with a native graph database.	Go beyond graph with multi-model.
Work with database built on SQL, not another proprietary language.	Save time you'd spend learning yet another proprietary language.

Connecting to OrientDB

Graph Data Model

Schema of above model

Graph Visualization
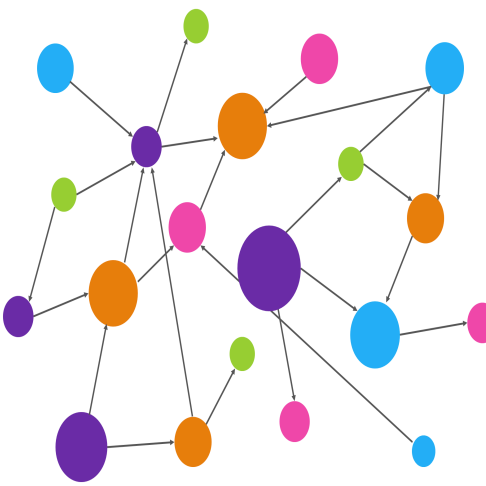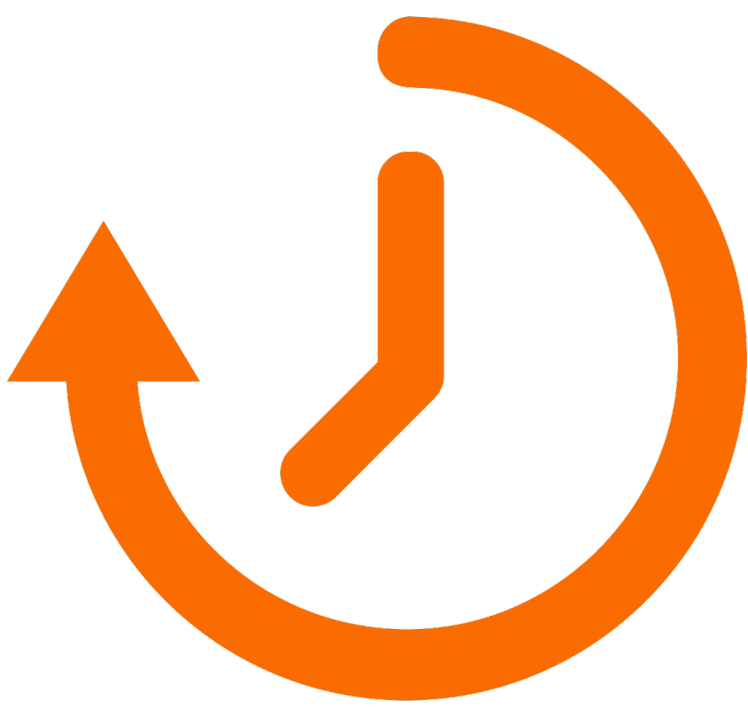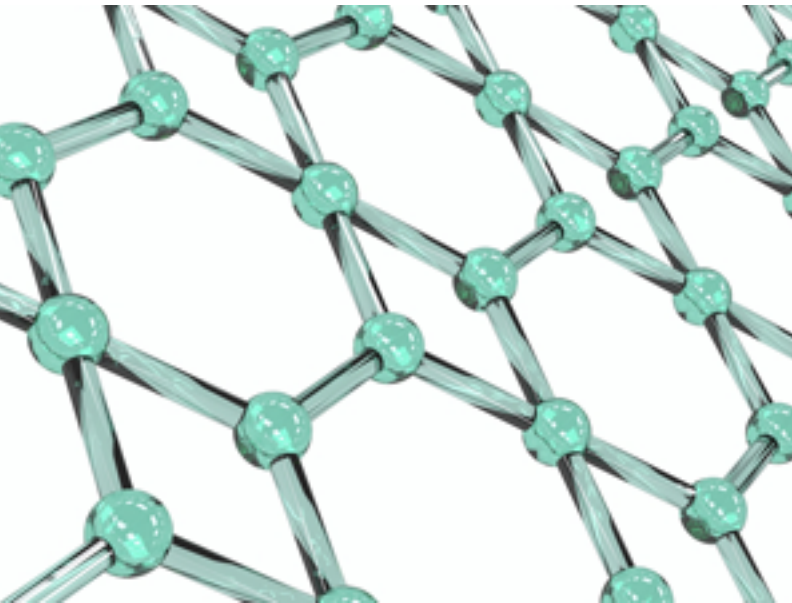
A front end application has been developed using .NET to demonstrate orientdb in a feasible way where all the categories of beers are displayed and a user can pick a category and it displays all the beers that has the selected category and if the user selects any of the displayed beer, it's style and all the breweries where that beer is available is displayed.

Conclusion

Since it provides a wide variety of different and powerful features that we can't find altogether in any other database, OrientDB can be considered a new generation DB, as it differs from its competitors by aggregating features from different engines: from having an object – oriented model to exposing REST interface, from being able to traverse a graph of thousands records at any level of depth, in milliseconds, to its simplified SQL syntax , all of the features that make this DB engine so unique will lead us to the conclusion that OrientDB is a game-changer in the DB market, as it provides variety of functionalities that they can never take advantage of with any other database management system.

Reference: https://orientdb.com/