

LDBC - State of the union

16th Technical User Community meeting Oskar van Rest (Oracle)

registered in the UK The Linked Data Benchmark Council (LDBC) is a non-profit organization which aims to define standard benchmarks and foster a community around graph processing technologies.

around graph processing technologies.

LDBC consists of members from both industry and academia, and is governed by a board of members.

standards

regular & sponsor members

GQL and

SQL/PGQ

institutions,
individual members

New members in the last 12 months

- Vesoft
- RelationalAI
- Beijing Volcano Engine Technology Co.
- Alibaba DAMO Academy
- Zhejiang Lab

Membership

23 organizations

• 3 sponsor companies, 17 regular companies, 3 academic institutions



Ant Group

Beijing Volcano Engine Technology Co.



Oracle Labs

Companies

Institutions





















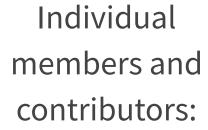














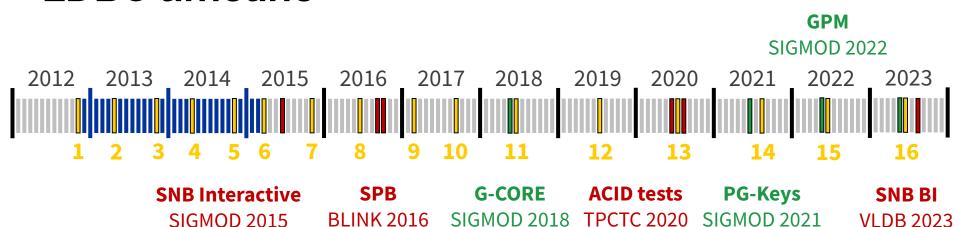




65+

TigerGraph

LDBC timeline



Graphalytics

PG-Schema VLDB 2016 SIGMOD 2023

GPC

PODS 2023

EU FP7 project

Benchmark papers | Language/schema papers

Technical User Community meetings

Organizational structure

Board of Directors

• Acting Chair: Oskar van Rest

Vice-chair: Alastair Green

Benchmark Expert: Shipeng Qi

• Advisor: Peter Boncz

Advisor: Gábor Szárnyas

Company secretary &

treasurer: Judy Bingham













Benchmark progress in the last 12 months

SNB Interactive 1.0¹

SNB Interactive 2.0

new audits: Ant Group TuGraph, OntoText GraphDB

most of the implementation work done

SNB Business Intelligence (BI) 1.0²

accepted as an official workload;

successful first audits conducted for TigerGraph

Financial Benchmark (FinBench)³

adopted as an official LDBC benchmark

¹LDBC SNB Interactive workload — https://ldbcouncil.org/benchmarks/snb-interactive/

²LDBC SNB Business Intelligence workload — https://ldbcouncil.org/benchmarks/snb-bi/

³LDBC Financial Benchmark (LDBC FinBench) — https://ldbcouncil.org/benchmarks/finbench/

Other progress in the last 12 months

Organizational restructuring Steering Committee ⇒ Board of Directors

Board of Directors ⇒ Members Policy Council

Fair Use Policy¹ Clear set of rules for publishing audited vs. unaudited

performance numbers

Extended GQL Schema (LEX) New working

working group²

New working group focusing on schema language for

property graphs

¹Fair Use Policy for LDBC Benchmarks® — https://ldbcouncil.org/benchmarks/fair-use-policies/

²LDBC Extended GQL Schema (LEX) working group — https://ldbcouncil.org/benchmarks/fair-use-policies/

New language standards

SQL/PGQ extension to SQL v1 published in June 1st, 2023

(part of SQL:2023) https://www.iso.org/standard/79473.html

GQL standalone language v1 publication expected early 2024

https://www.iso.org/standard/76120.html

Join LDBC to get the draft standard documents.

Proposal for audits

The total cost of ownership of audited results includes *maintenance fees*

This is currently required to be enterprise grade with 24/7 availability with a 4h response time

Proposal: allow systems without 24/7 support to be audited and report 3 tiers of support

	Enterprise	Standard	Community
Requirement	24/7 availability with 4h response time	Availability during business hours	Availability of some community support
Reported information	Cost for 3 years	Cost for 3 years	Open-source project, issue tracker, community forums, etc.



The graph & RDF benchmark reference