LDBC Social Network Benchmark Interactive Workload – Audited Run – Executive Summary

System Details

Test Sponsor:g	GraphScope Flex 0.26.1	LDBC SNB Interactive v0.3.6 Workload v1 Auditing Policies v0.3.6
Alibaba Cloud	GraphScope	Availability date of the SUT: 2024-04-01

Cloud provider	Machine region / instance type	Operating system	Database management system
Alibaba Cloud	Ulanqab / ecs.r8a.16xlarge	Ubuntu 20.04.6 SMP	GraphScope Flex 0.26.1

Server processor cores / threads / type	Total cache size per CPU	Memory size	Storage / file system / average performance
32 / 64 / AMD EPYC 9T24 @ 3.7GHz	L1 cache: 1MiB Data + 1MiB Instruction L2 cache: 32 MiB L3 cache: 128 MiB	512 GiB	4TB NVMe ESSD / xfs / 10,000 IOPS

System Pricing

Total system cost	Machine cost	License cost	Maintenance fee
738,724.72 RMB	338,724.72 RMB (ecs.r8a.16xlarge reserved instance machine in Alibaba Cloud, standard 3-year term)	0.00 RMB	400,000.00 RMB

Benchmark Configuration and System Settings

Datagen version	v0.3.8		
Driver version	v1.2.0		
Implementations version	v1.0.0		
Driver read threads	48		
Data partitions / driver write threads	48 / 96		
Data format	CsvComposite		
Scale factor	100	300	1000
Time compression ratio	0.001	0.00335	0.0227
Transaction isolation level	Serializable		

Summary of Performance Metrics

Scale factor	Benchmark duration	Benchmark operations	Throughput (ops/s)	On-time query compliance
100	02h 00m 23s	939,750,919	130,098.36	99.97%
300	02h 01m 03s	953,465,825	131,263.87	99.98%
1000	02h 01m 33s	931,967,792	127,784.51	100.00%

Audited by Arnau Prat-Pérez	Report Date: 2024-05-14
This summary references an audited LDBC benchmark run. The results have been gathered by an independent and impartial auditor who has validated the implementation of the queries, successfully run the ACID tests associated with the claimed isolation level, and verified the overall system's configuration conformance to the description of the benchmark and its strict requirements.	