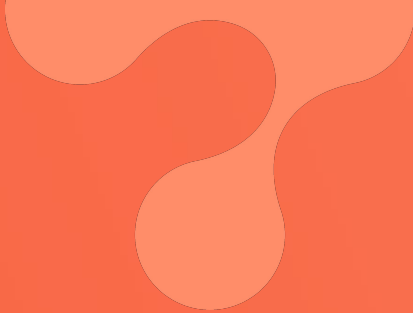


Neo4j AI Product Keynote

July 2026



Ajay Singh

GVP, Field Engineering

ajay.singh@neo4j.com

Safe Harbor Roadmap Disclaimer

The information presented here is Neo4j, Inc. confidential and does not constitute, and should not be construed as, a promise or commitment by Neo4j to develop, market or deliver any particular product, feature or function.

Neo4j reserves the right to change its product plans or roadmap at any time, without obligation to notify any person of such changes.

The timing and content of Neo4j's future product releases could differ materially from the expectations discussed herein.

Database Fundamentals

Type	Optimization Dimension
Relational	Atomic Read & Writes
Warehouse	Storage & Analytics
NoSQL	Flexibility & Throughput
Graph	Relationships & Connections

Key Advantage of Graph Intelligence Platform :

Are 2 entities connected and if yes, how ?

Non Graph Database



- Come up with hypothesis
- Write complex queries to validate hypothesis
- Cannot auto-discover new/previously unknown connections

Graph Database



- Find the entity
- Traverse its relationship to uncover connections to other entities
- Auto-discover new relationships

AI & The Need For Knowledge Graph



GenAI Applications are Dynamic, Adaptive,
Self-Reasoning & Autonomous



Need an ability to discover and traverse
related concepts

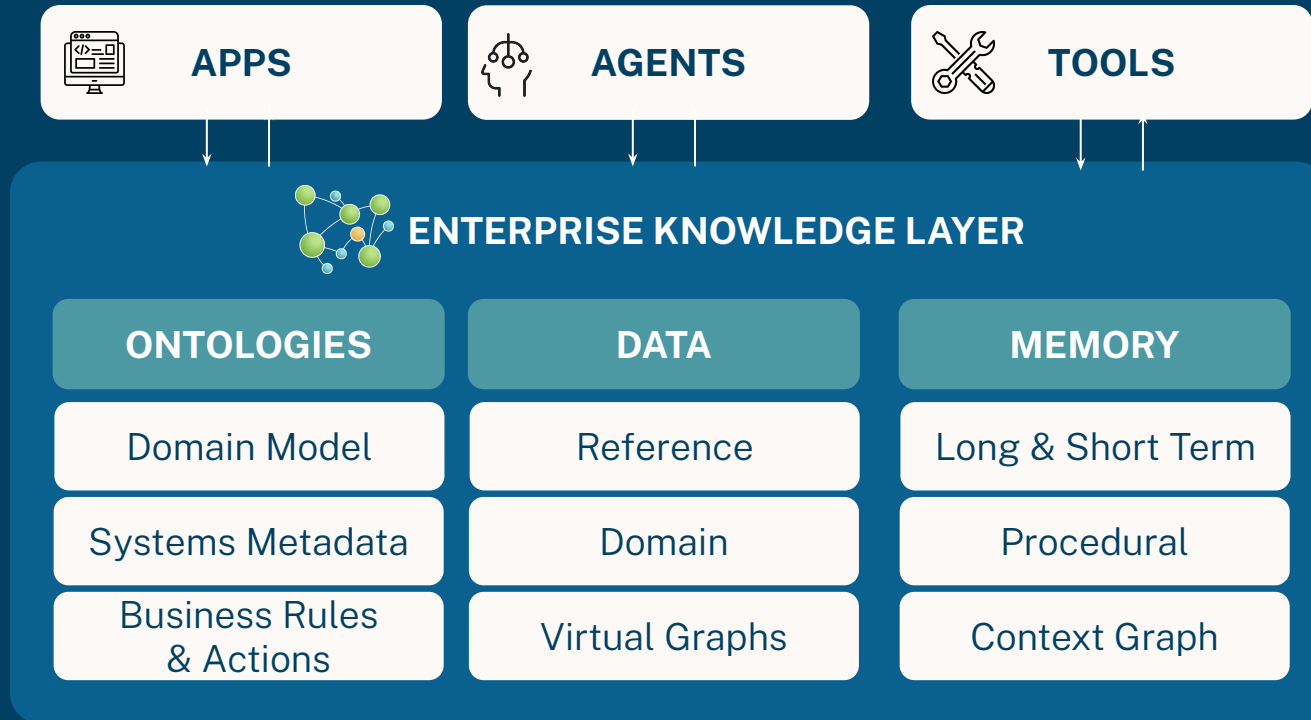


Knowledge Graphs stored in a graph database
with relationships and connections at its core is
the ideal context layer



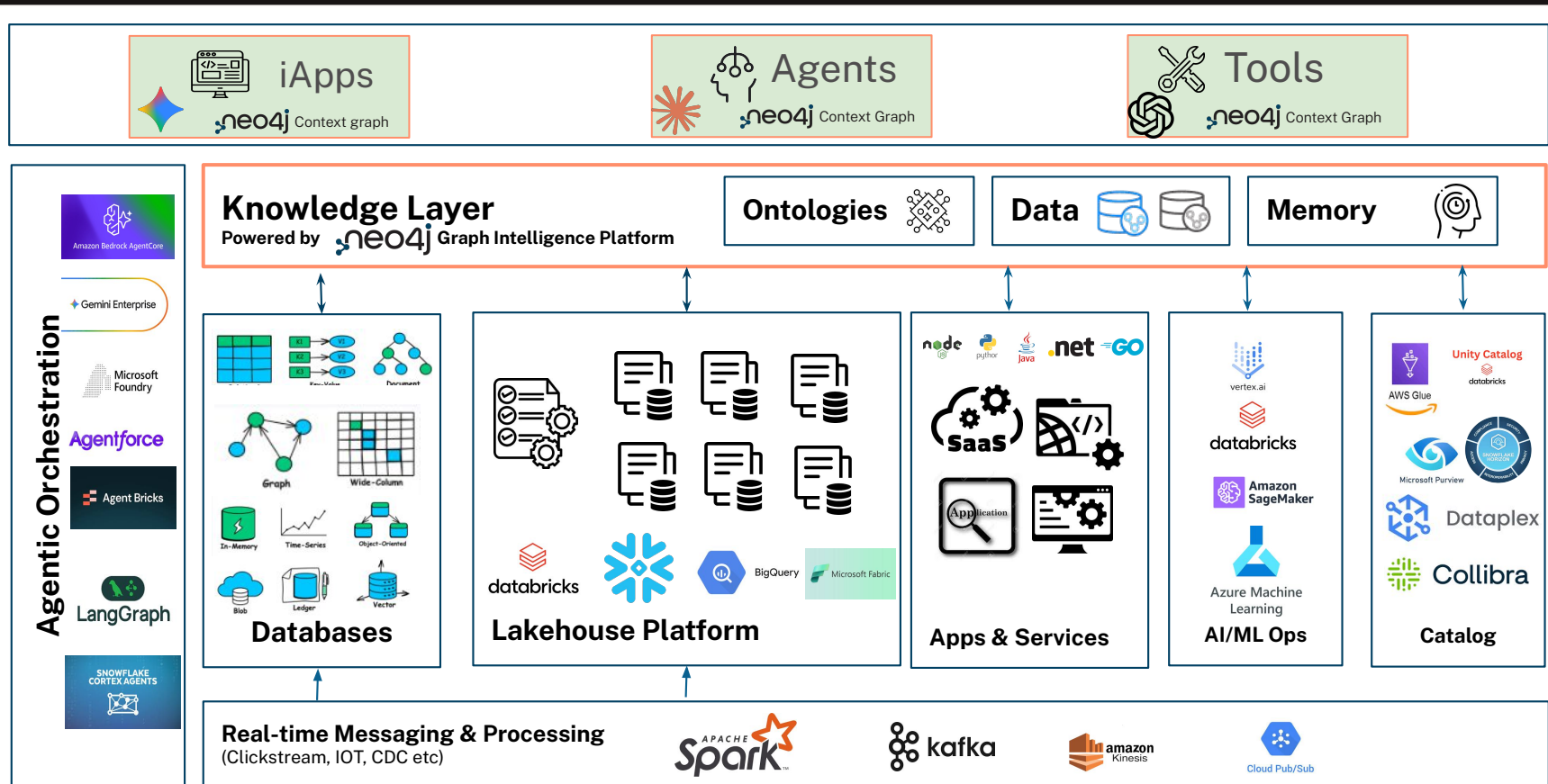
GenAI Need Knowledge Layer

Enterprise Knowledge Layer



An **Enterprise Knowledge Graph (EKG)** provides the semantic layer and relational context necessary for agents to move from simple pattern matching to accurate, grounded reasoning.

Enterprise Agentic Reference Architecture



GenAI Roadmap

Neo4j's Graph Intelligence Platform

Most Comprehensive platform to build enterprise knowledge Layer

Graph AI

Agents & Ecosystem

Build multi hop agents in seconds.

Integrate with AWS, GCP, Azure, LangChain, ServiceNow, Salesforce, Databricks & Snowflake

Agentic Brain

Provides foundational services like memory, context-graph to power all AI platforms.

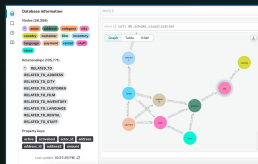


Agentic Solutions

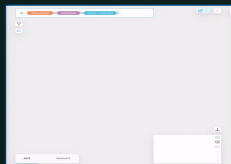
GraphAware Hume (Intelligence Analytics), NeoCarta (Enterprise Semantic Layer)

AI Powered Graph Tools

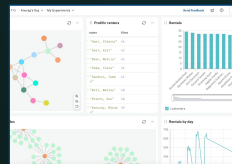
Browser (Query)



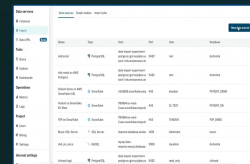
Bloom (Explore)



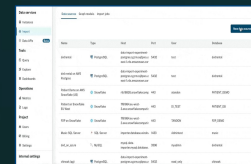
NeoDash (Dashboards)



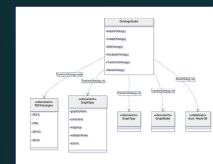
Data Import



Document Intelligence



Ontology Management



Database & Graph Algorithms

Database

Intelligent Operational Database

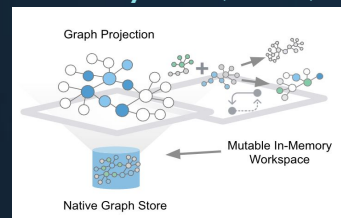
Better Predictions for Analytics



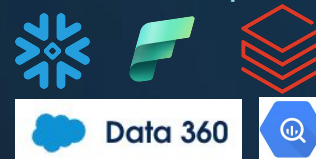
Graph Transactions, Storage & Querying

Graph Analytics, ML & Data Science

Analytics (GDS)



Graph Engine (Virtual Graph)



Neo4j's Graph Intelligence Platform

Most Comprehensive platform to build enterprise knowledge Layer

Graph
AI

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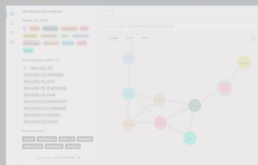


Agentic Solutions

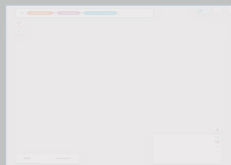
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AI
Powered
Graph
Tools

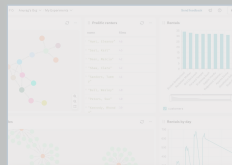
Browser
(Query)



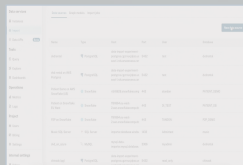
Bloom
(Explore)



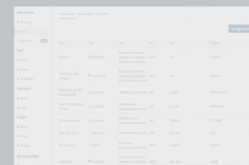
NeoDash
(Dashboards)



Data
Import



Document
Intelligence



Ontology
Management



Database
& Graph
Algorithms

Database

Intelligent Operational Database

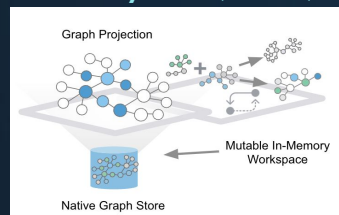
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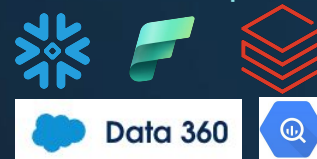
Graph Transactions,
Storage & Querying

Graph Analytics, ML,
& Data Science

Analytics (GDS)



Graph Engine (Virtual Graph)



Most Powerful Database for GraphRAG

Vector Support

Vector Type in Cypher 25

Store embedding properties on nodes and relationships as vector in the database

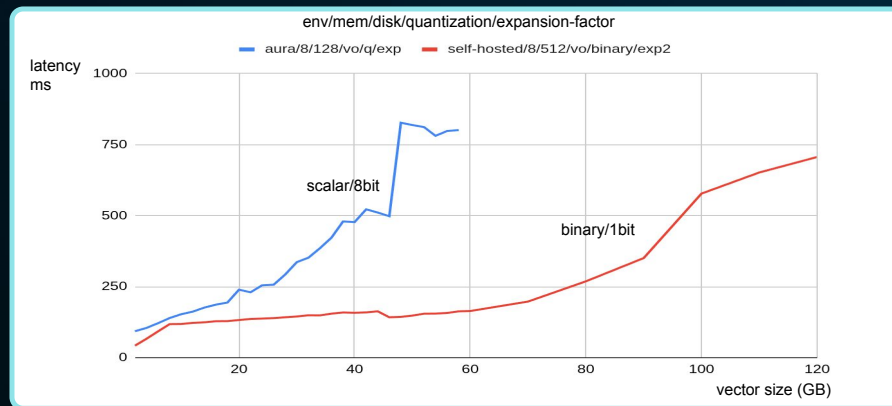
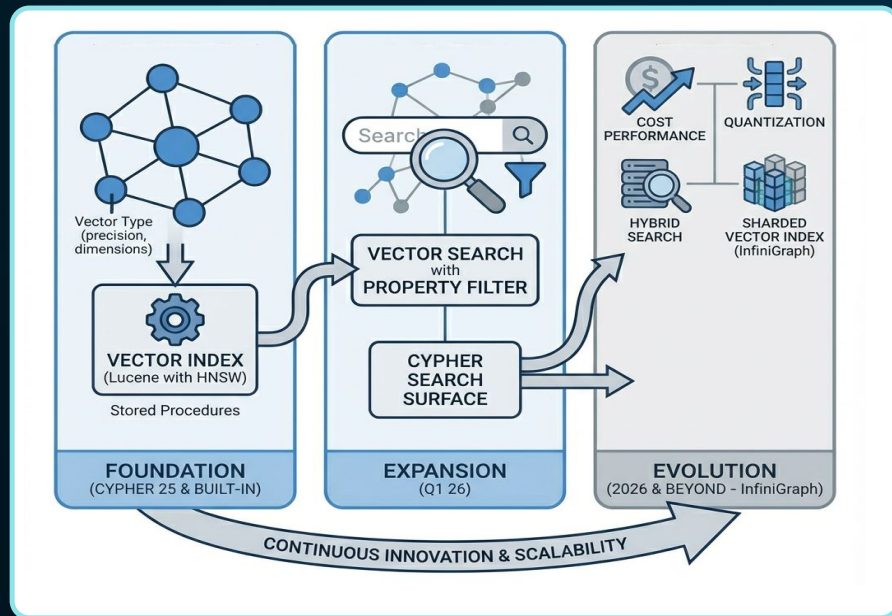
Vector Index built into the database

Embedding generation from Cypher AI functions for OpenAI, Azure OpenAI, VertexAI, Bedrock

Vector Search with filters and Cypher Search Surface (Q1 26)

High Fidelity Quantization (HFQ,BBQ), exp. factors IN Filters (Q2 26)

Cypher MATCH Filter, Hybrid Search (H2 2026)

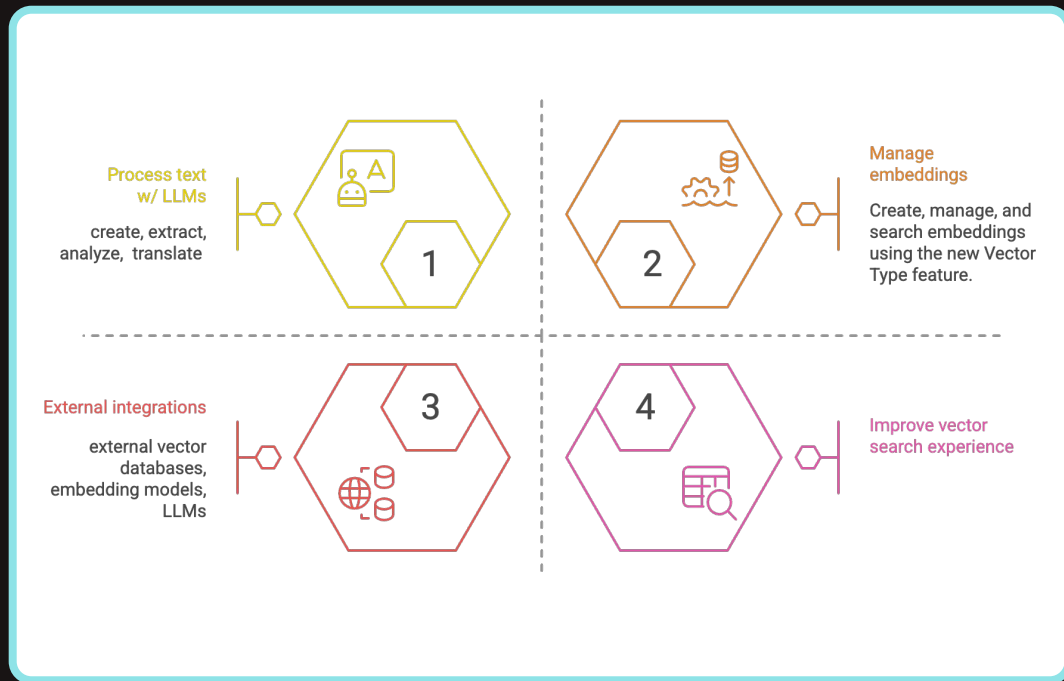


Cypher AI Integration

Enable users to run AI functions directly from the **Cypher 25** query language:

- **Process text** with popular LLMs (create, extract, analyze, translate)
- Chat completion
- Structured output
- Create **embeddings** (based on **Vector Type**) from text/files
- Providers: (Azure) OpenAI (BaseURL), Bedrock, VertexAI
- Token counting, chunking
- Coming: Audio, Image

Security: Secrets mgmt in Chamber of Secrets/Database (LLM models creds)



Integrated in genai-plugin, needs to be installed in self-managed from products folder

Most developer-friendly platform for Agentic AI

Available

GraphRAG Python Package

Construct knowledge graphs from unstructured data/documents using schema

Write to Neo4j or Parquet for efficient ingest

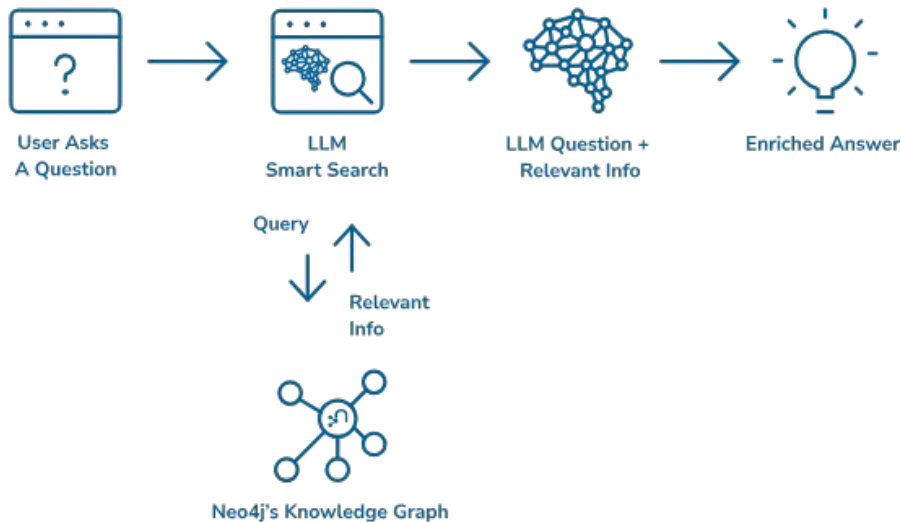
Implement different GraphRAG retrievers

Build GenAI RAG pipelines with vector and hybrid search and GraphRAG retrieval

Retrievers as Agent Tools

External vector search integration

Query Knowledge Graph with LLM Application



Introducing Neo4j Virtual Graph Engine

A virtual graph database that brings full graph intelligence to your databases and lakehouses

Query your Databricks, Snowflake, or SQL DBs as a graph → with the complete Neo4j stack.

True Zero-Copy

No hidden caches. No background data duplication. Your warehouse is the only system of record — always. Unlike competitors, we're explicit about where data lives.

60+ Graph Algorithms

PageRank, Louvain community detection, node similarity, and more via GDS Sessions. Run real graph analytics — not just traversals.

AI-Powered Queries

Don't know Cypher? Copilot translates natural language to graph queries. No learning curve required — ask questions in plain English.

Deploy to Value: Days

First query same day. Production insights in weeks, not quarters. Start proving ROI before any major investment.

BEYOND VIRTUALIZATION → FULL GRAPH INTELLIGENCE

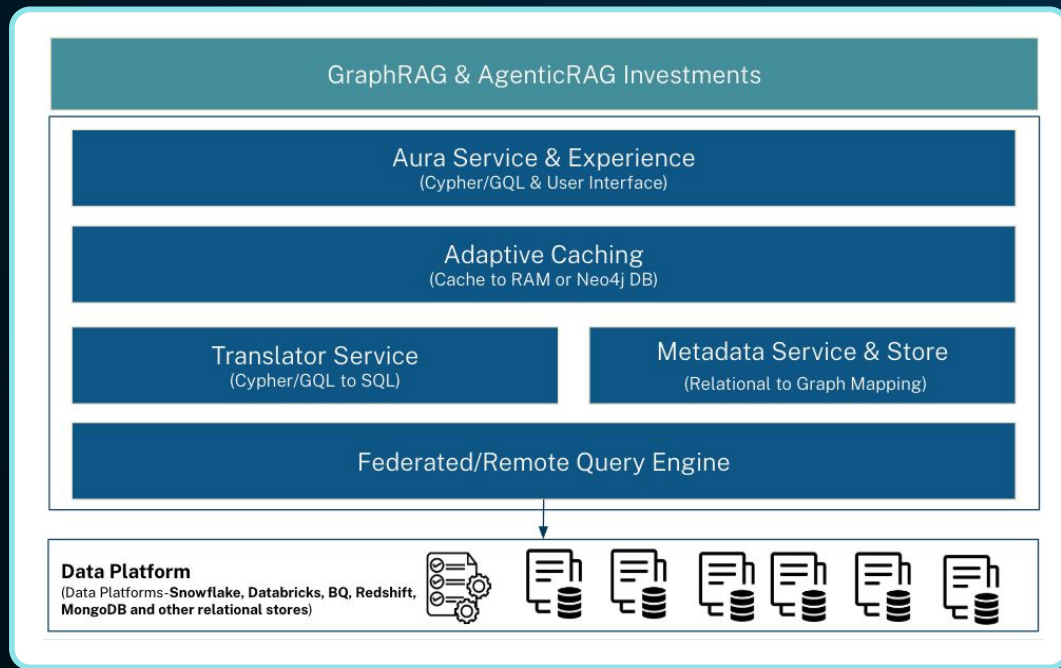
Anyone can query graphs. Graph Engine delivers the complete intelligence stack — algorithms, visualization, AI copilot — that turns a query into business impact.

Virtual Graph

Preview: Q2 2026

Zero copy graph querying on enterprise data sources.

- Supports: Databricks, BigQuery, Snowflake
- Schema -> Mapping -> VG
- Usable in all surfaces
- Limited Cypher
- Q3: improved Cypher surface, QPP, Iceberg, AWS
- Q3: Self managed experience
- Q4: Caching/ingestion



Neo4j's Graph Intelligence Platform

Most Comprehensive platform to build enterprise knowledge Layer

Graph AI

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Build multi hop agents in seconds.

Integrate with AWS, GCP, Azure, LangChain, ServiceNow, Salesforce, Databricks & Snowflake

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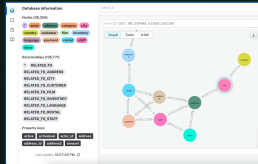


Agentic Solutions

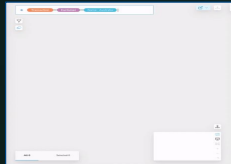
GraphAware Hume (Intelligence Analytics), NeoCarta (Enterprise Semantic Layer)

AI Powered Graph Tools

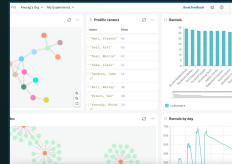
Browser (Query)



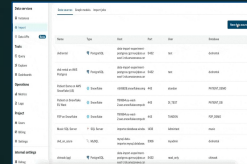
Bloom (Explore)



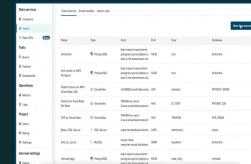
NeoDash (Dashboards)



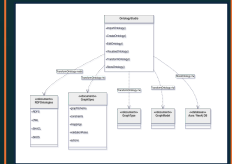
Data Import



Document Intelligence



Ontology Management



Database & Graph Algorithms

Database

Intelligent Operational Database

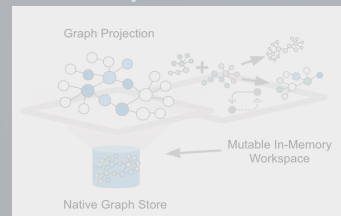
Better Predictions for Analytics



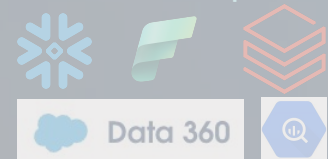
Graph Transactions, Storage & Querying

Graph Analytics, ML & Data Science

Analytics (GDS)



Graph Engine (Virtual Graph)



Ontologies as first class citizen

Headless experience is TOP PRIORITY!!!

Neo4j Graph Schema

- **Graph modeling**
 - Define and store graph models through headless & UX/AX/DX
 - Store as Neo4j graph (must)
 - Support Aura and EE.
 - Support global (Neo4j) + Enterprise (org) + Personal
- **Enforcement**
Enforce schema in database.
- **Unified Store**
Data model and actual data should be stored in Neo4j database
(Critical for Semantic Layer)

Import from RDF (Labs)

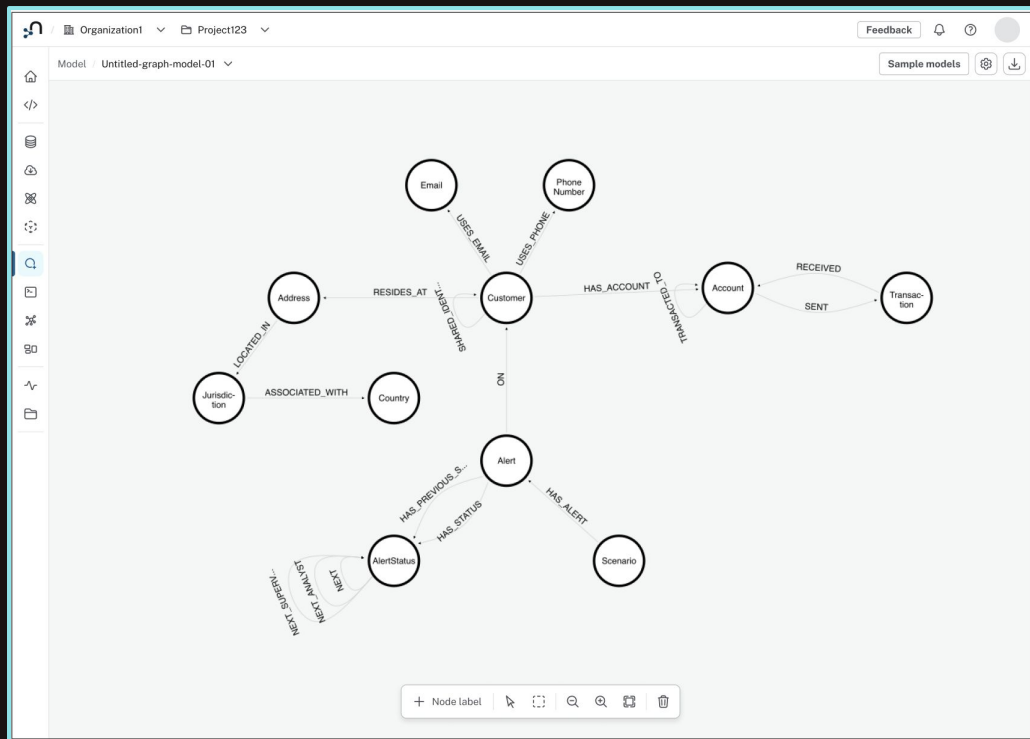
- **Domain Metadata**
Import from RDF ontologies; apply labels, constraints, and business rules.
- **Taxonomy & Reference Data**
Import taxonomic and reference data from existing RDF ontologies.

Semantic Layer (NeoCarta)

- **Metadata Store**
Store inter-relationships for all enterprise systems as a Neo4j graph.
- **Actionable APIs**
Store possible actions across systems (e.g., cancel subscription).
- **Business Rules**
Centrally store and apply business rules.
- **Domain Import**
Ability to import reference or domain data as needed.

Ontology Management

Coming in 2026



Data modeling as a 1st class entry point, independent of data import

Save data models in a catalog and collaborate with team members before implementing

Choose from a repository of use-case-specific **sample models**

Export graph data models for use with external data pipelines

Enforce data models and constraints using graph schema capabilities of Neo4j database

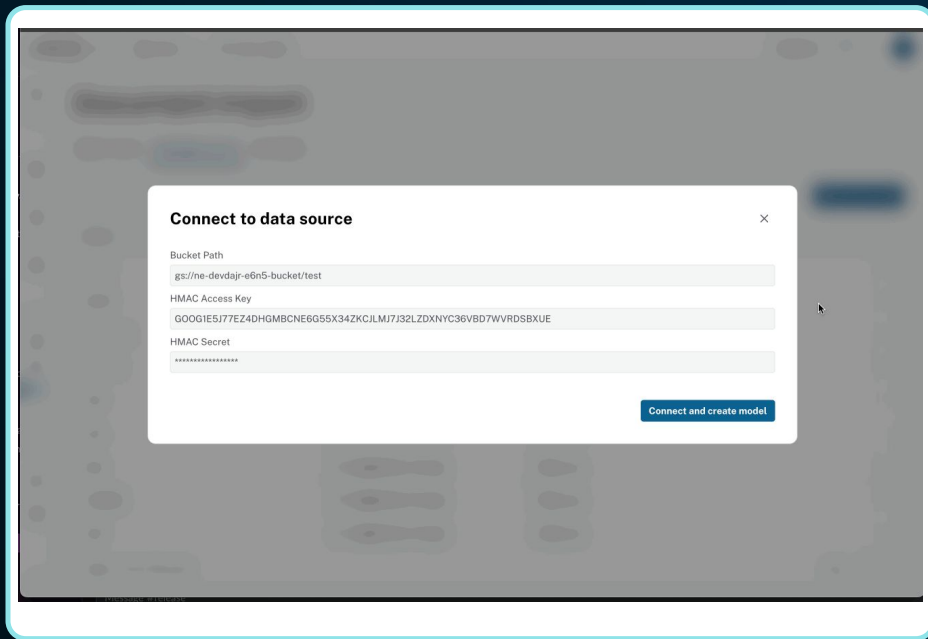
Import external ontologies for use as Neo4j graph data models

Document Intelligence

Preview: Q2 2026

Use LLMs with a graph schema to construct high quality knowledge graphs efficiently from unstructured data

- Integrated experience in Aura console
 - document upload or cloud buckets
 - schema AI generated from sampled docs
 - interactive, contextual schema assistant
 - processes 100s of pages
 - No Self Managed experience
-
- Q3 - GA Self service: scalability, 1000s of pages, complex layouts, extraction quality, API/CLI
 - Q4: Enterprise, VDC, BYOP/BYOM, Scale



Neo4j's Graph Intelligence Platform

Most Comprehensive platform to build enterprise knowledge Layer

Graph AI

Agents & Ecosystem

Build multi hop agents in seconds.

Integrate with AWS, GCP, Azure, LangChain, ServiceNow, Salesforce, Databricks & Snowflake

Agentic Brain

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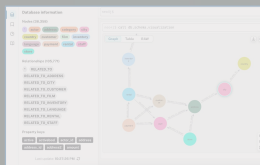


Agentic Solutions

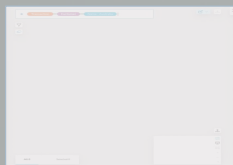
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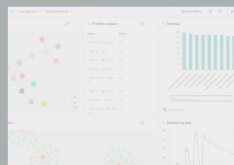
Browser (Query)



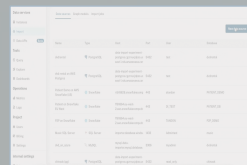
Bloom (Explore)



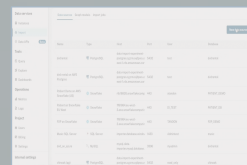
NeoDash (Dashboards)



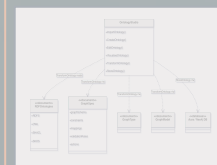
Data Import



Document Intelligence



Ontology Management



Database & Graph Algorithms

Database

Intelligent Operational Database

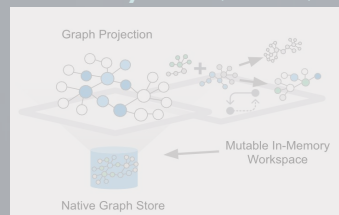
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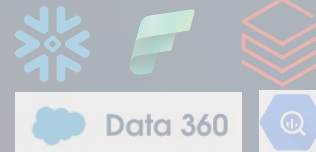
Graph Transactions, Storage & Querying

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Graph Engine (Virtual Graph)



Agentic Engineering with Neo4j

Most developer-friendly platform for Agentic AI

Discoverability

can agents find Neo4j context and capabilities

neo4j.com/llms.txt

- drivers
- MCP
- graphrag
- skills
- modeling, cypher
- docs, graphacademy

Usability

can agents effectively run Neo4j skills and tools

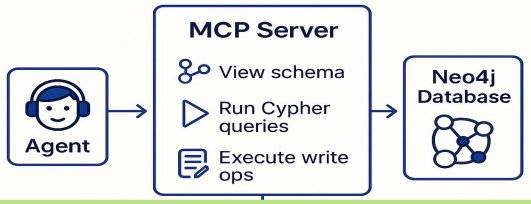
▲ / Skills

skills / neo4j-contrib / neo4j-skills

neo4j-contrib/neo4j-skills

31 skills 7.3K total installs GitHub

```
$ npx skills add neo4j-contrib/neo4j-skills
```



Invocability

can agents invoke Neo4j via CLI, API, and MCP

The graph database, in your terminal.

A super CLI for Neo4j. Manage Aura instances, run Cypher against any database, and teach your AI agents to drive it all — without ever leaving the prompt.

macOS Linux Windows Homebrew pipx npm

```
$ curl -sSL https://neo4j.sh/install.sh | bash
```

detected macOS - C / Ctrl C to copy from anywhere

neo4j.sh

// quickstart

From zero to graph in 60 seconds.

New to Neo4j? AuraDB has a free tier — no credit card.

- consolidated API
- operations latency

AX measures how easily AI agents discover, use, and invoke Neo4j. As agents become primary API consumers, it requires deliberate investment across three pillars.

Most developer-friendly platform for Agentic AI

MCP Servers

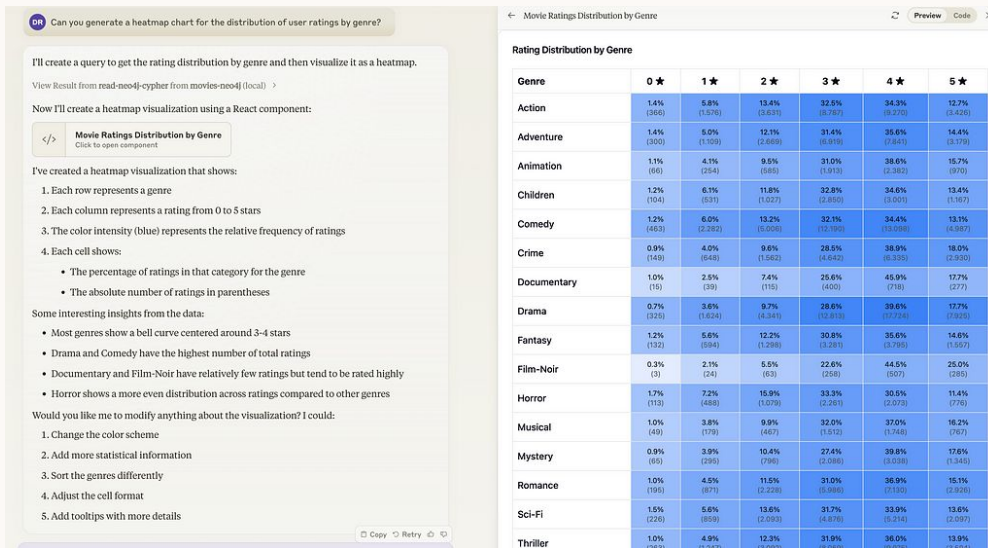
MCP is the AI native tool integration protocol for agents.

For APIs, Databases, SaaS services.

Official MCP Server for

- Core Database & GDS (Q4 25)
- Aura Agents (Q1 26)
- Hosted: Aura Databases (Q2 26)
- Graph Analytics/AGA (Q3 26)
- Aura APIs (Aura mgmt) (H2 26)

Now Available

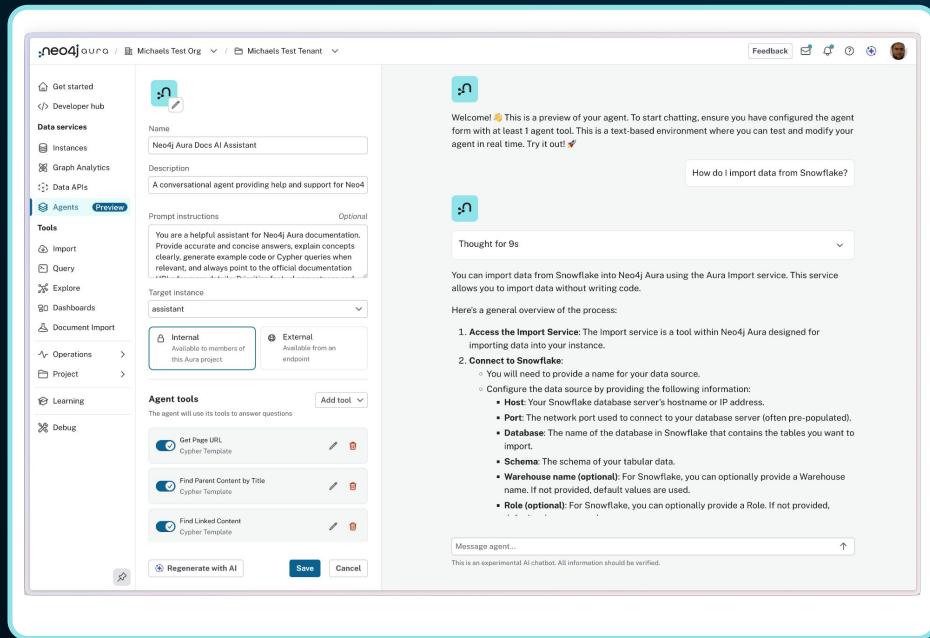


Most developer-friendly platform for Agentic AI

Aura Agents

GA - Feb 2026

- No/Low code Agent **creation**: Agent creation with AI, Admin UI to create/edit an agent
- GraphRAG **tools**: Cypher, Vector Search (+Cypher), Text2Cypher
- Embedding: AzureOpenAI, Google Gemini
- Agent Test UI: Prototype, iterate your agent with built-in chat
- **API**: Aura API REST endpoint
MCP API + M2M
- Available in **tiers**: Aura Free, Professional and Business Critical
- Pricing \$0.35 per agent hour for public
- Next: VDC (AWS), Evaluation, Usability Improvements, Conversation History



Agentic Brain Services Update

Most developer-friendly platform for Agentic AI

Labs



Memory

Solution

- Launched open source Memory package and managed Service
- **Reasoning memory** as a graph model is the differentiator => enables to context graph, skill distillation from decision traces

Next Steps

- Evolve memory service & skills to validate integrations with various Agentic Platforms
- Build memory capabilities for Aura Agents
- Design graph powered Agent Services to improve Agent Platforms (efficiency, explainability, accuracy)

Context Graph

Solution

- Open source package to create Context Graphs including domain models
- Integrated into agent frameworks to simplify adoption
- Integrated with memory service to demonstrate value
-

Next Steps

- Monitor and learn usage patterns to make future product decisions

Deep integrations across the AI ecosystem

AI & Agent Ecosystem

Integrated with AI ecosystem

- AI Libraries & Frameworks
- Agent Frameworks
- CSP AI platforms
- Enterprise Agent Platforms

Ongoing



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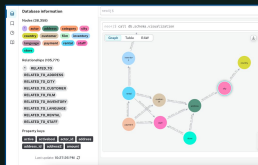


Agentic Solutions

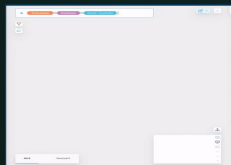
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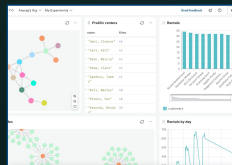
Browser (Query)



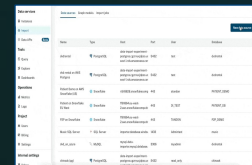
Bloom (Explore)



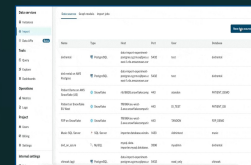
NeoDash (Dashboards)



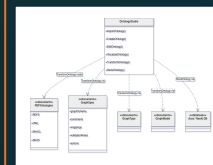
Data Import



Document Intelligence



Ontology Management



Database & Graph Algorithms

Database

Intelligent Operational Database

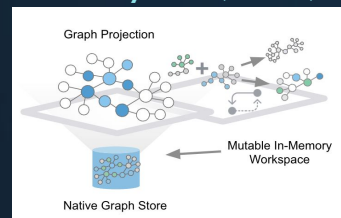
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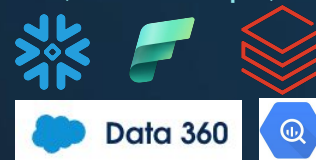
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Graph Analytics, ML & Data Science

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HYBRID ADMIN EXPERIENCE

Fleet Management

Centralized Management

Monitor & manage all Neo4j databases across the enterprise

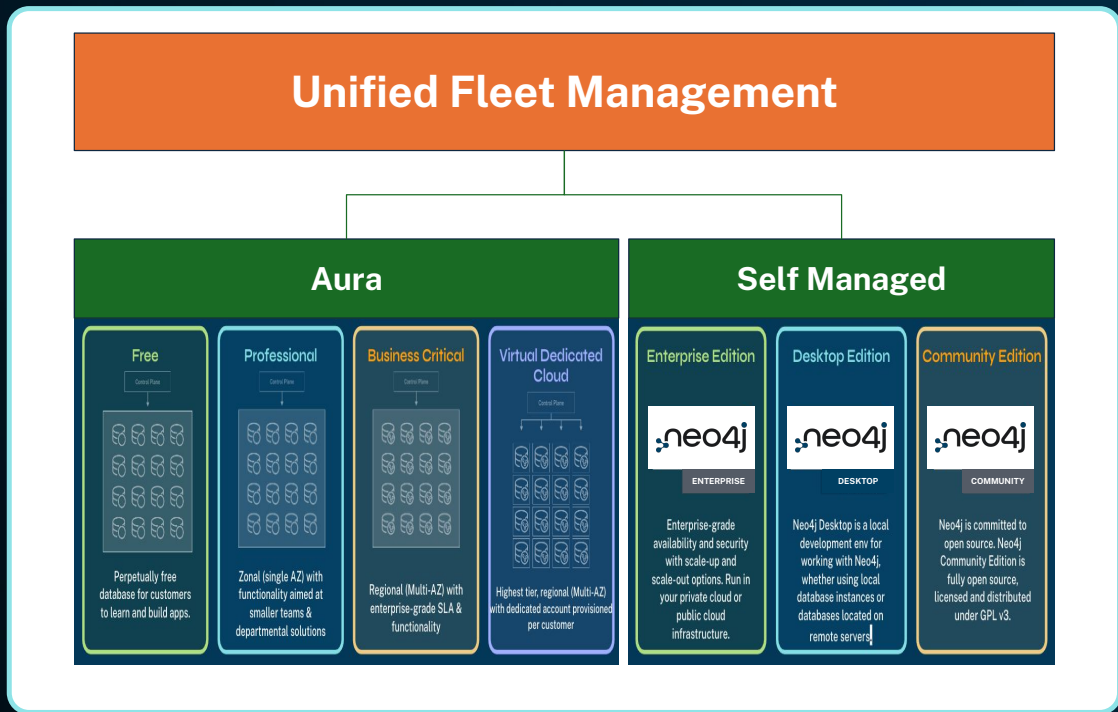
Proactive Monitoring

Insights and health monitoring to optimize performance and reliability
Identify security risks

Streamlined Operations

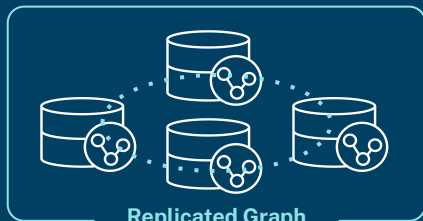
Seamless workload operations across databases to reduce risk and downtime of your enterprise data

Easily migrate self managed databases to Aura with few clicks



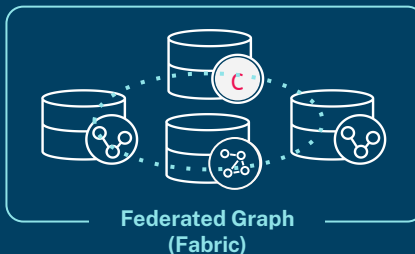
Now Available

Create Large Scale Sharded Graphs



Graph that fits on single machine in a single clustered environment replicated for read scalability.

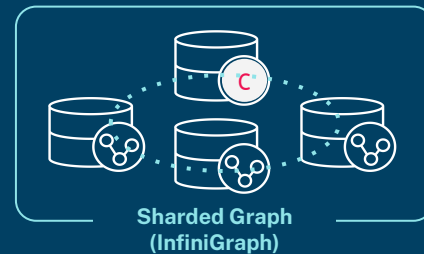
Johnson & Johnson BT Group Fidelity INVESTMENTS



Different graphs (supply chain & parts graph) in an organization being queried to aggregate information.

Could be Replicated or Sharded.

AstraZeneca Graphable



Single Graph sharded across many machines across clustered environments.

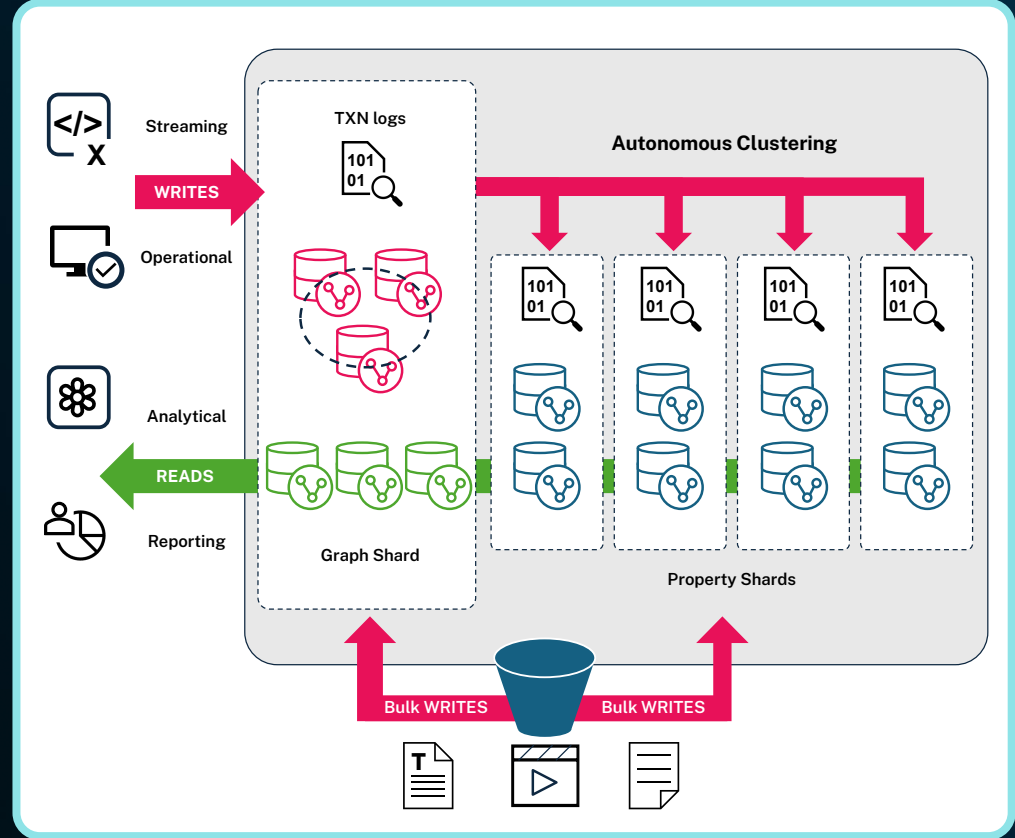
Growing need to support large graph sizes.

un&bradstreet

NEW CAPABILITIES

Large Graph Support

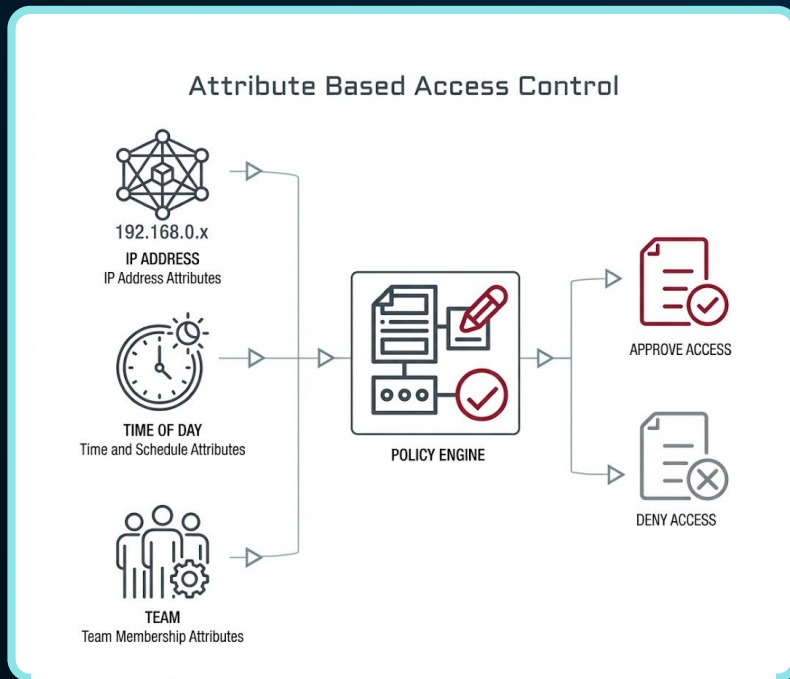
- **High data volumes** - up to 100TB (and potentially more) of graph data
- **Fast data loading** - initial bulk import and staging/live incremental updates
- **Semantic indexes** - sharded full-text and vector indexes are natively integrated
- **ACID** - fully transactional and ACID compliant
- **Simplicity** - Transparent to user, standard Cypher
- **Analytics** - supports Neo4j tools (Query, Explore, Graph Analytics)
- **Transparent** to all API calls



Now Available

ABAC - Attribute-Based Access Control

- Dynamically control access based on attributes, such as IP addresses, time of day, or other custom environmental & contextual factors.
- Limiting access based on attributes like IP addresses prevents unauthorized access from untrusted locations, adding an extra layer of protection.

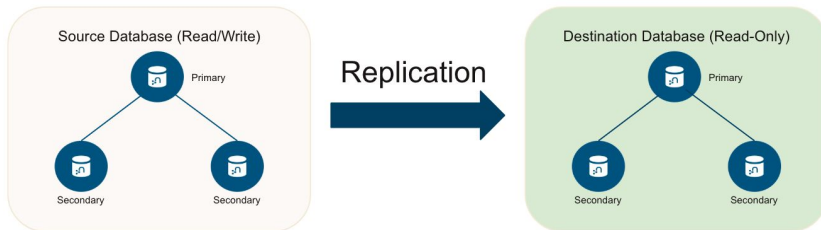


Cross-Cluster Replication

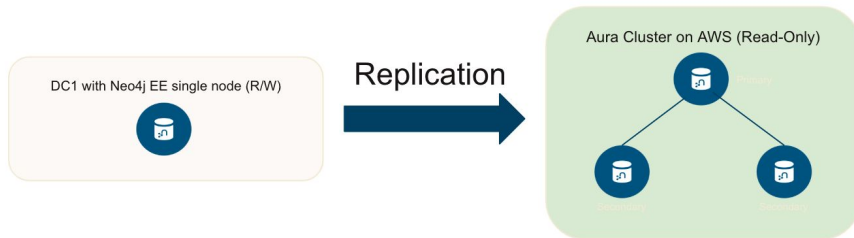
- Replication of data from one database instance to another.
- Replication across instances running in any configuration (across DCs, Clouds platform, Self managed vs Aura).
- Neo4j to be Tier 1 platform in enterprises with potential to deliver RPO (0) /RTO (15min)

Core DB GA - July 2026
Aura - Q4 2026

High Availability across DCs/Regions



Migrate Self Managed Databases to Cloud



Comprehensive Cloud Offerings for all Workloads

Now Available
Free Trial

Now Available

Free

Control Plane



Perpetually free
database for customers
to learn and experiment
with apps

Professional

Control Plane



Zonal (single AZ) with
functionality aimed at
smaller teams &
departmental solutions

Business Critical

Control Plane



Regional (Multi-AZ) with
enterprise-grade SLA &
functionality

Virtual Dedicated Cloud

Control Plane



Highest tier, regional
(Multi-AZ) with dedicated
account provisioned per
customer.

Business Critical Enhancements

Coming in 2026

Private Link connectivity: AWS first (mid 2026), with planned rollout to GCP and Azure.

Marketplace availability: Available via AWS, GCP and Azure marketplaces.

Security transparency: Comprehensive security white paper and reference architecture available in the Trust Center.

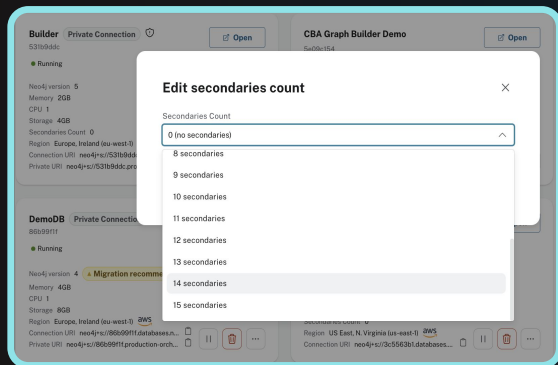
Global footprint: Available in 30 regions across 3 cloud providers.

Business Critical



Regional (Multi-AZ) with enterprise-grade SLA & functionality

Scalability Options



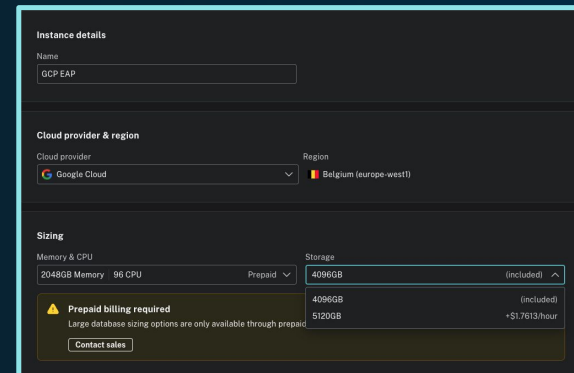
Now Available

**Read Scalability with upto
15 Secondaries**

Memory	CPU	Storage
2GB	1 CPU	4GB
4GB	1 CPU	8GB
8GB	2 CPU	16GB
16GB	3 CPU	128GB
32GB	6 CPU	32GB Included 64GB +\$0.0551/hour 128GB +\$0.1052/hour
64GB	12 CPU	128GB

Now Available

**Adjustable Storage up to 1:16
ratio**



Now Available

**Scale Up to 2TB (RAM) :5TB (Disk)
on BC/VDC**

AURADB NEW CAPABILITIES

Security & Compliance

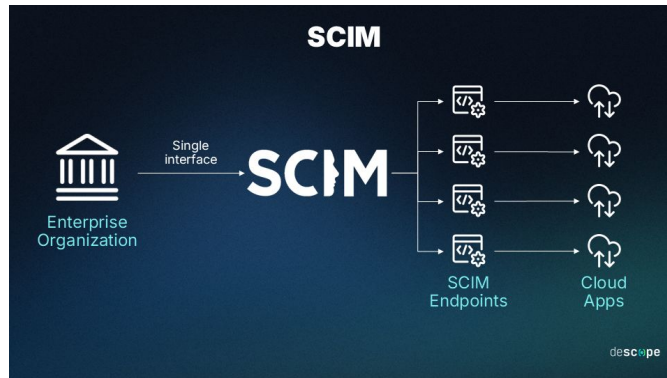
Coming in 2026

Group Console role mapping, dynamic SSO, and SCIM for Aura are also coming, enabling automated user provisioning and deprovisioning across identity domains.

Support for Custom SSO removing need for Support assisted configurations, **Project level SSO** will also apply for existing instances

Private Endpoints (aka Private Link) for Business Critical Tier

New Compliance: ISO 9001 & Aura FIPS, ISO 27017/18 and TISAX



AURADB NEW CAPABILITIES

Multi-DB on Aura

Private EAP
GA Coming in 2026 (Delayed)

Enables AuraDB customers to create **multiple databases** within a single AuraDB Instance

Cost Efficiency: Reduces the need for multiple AuraDB instances, lowering infrastructure and operational costs.

Improved Scalability: Allows users to add databases quickly without provisioning new instances, speeding up growth.

MDB Test Instance ✎ ● RUNNING

Overview Databases Snapshots Restore from backup file

Create database

Name	Nodes	Relationships	Status	
08c35c84	96	28	● RUNNING	...
293fd870	44	13	● RUNNING	...
317dbb62	44	13	● RUNNING	...
5ecd519	150	31	● RUNNING	...
6c237bc0	44	13	● RUNNING	...
c061327b	100	34	● RUNNING	...
cd78d1e0	53	14	● RUNNING	...
eaaa7736	44	13	● RUNNING	...

Showing 1-8 of 8 results Show 10 ▾

An aerial photograph of a pod of dolphins swimming in the ocean. The dolphins are dark, sleek shapes moving across the textured, blue water. The background is a deep blue, with a large, wavy orange shape on the right side. In the top left corner, there is a green abstract shape, and in the bottom left corner, there is a blue abstract shape.

Thank You!