

Stardog

ENTERPRISE
KNOWLEDGE
GRAPH

PROPERTY GRAPHS AND KNOWLEDGE GRAPHS

In the Enterprise, Knowledge Graph solutions have to solve for a difficult challenge: data silos. Information assets naturally pool in infrastructure and department-locked domains over time. The explosion of incompatible architectures, formats and schemas aggravates every enterprise-wide strategic data initiative.

IN THE DIGITAL AGE, ALL STRATEGIC INITIATIVES TEND TO FUNDAMENTALLY BE DATA INITIATIVES

Building a Knowledge Graph Platform to address these challenges requires a high degree of flexibility, reusability and enterprise tooling that can serve technology and business use cases on demand.

WHERE PROPERTY GRAPHS FIT IN THE ENTERPRISE

Strengths:

- **Highly flexible:** Any data objects can be represented in plain graph databases
- **Excellent Zero-Day Productivity:** They don't require any schema or ontology
- **Raw graph data structure:** Friendly to physical graph traversals and analytics

Weaknesses:

- **Reach:** Not built to virtualize data and tie domains together; only to materialize and silo data
- **Reuse:** Lacks a declarative model, relationships between nodes and edges have to be defined and assigned manually as new data is added to the graph
- **Query:** Property graphs use Cypher or Gremlin for queries. They're effective for traversing the physical graph itself but lack the expressivity and ability to yield structured views of data or a query language like SPARQL

Property or 'Plain' Graph solutions serve an emerging class of data use cases (everything from social networks to fraud detection) that take advantage of the physical connections between objects and should be part of any enterprise architect's toolkit for point use. They are not optimized for serving more than one point use at a time, or the higher-order needed to virtually integrate data in silos.

Property graphs fall short of enterprise-wide utility since they lack the ability to accommodate operational data stores (without duplication or deprecation) or unify structured and unstructured data.

The Stardog Enterprise Knowledge Graph uses the organization's investments in data management as a starting point, leverages the advantages of graph data structure to connect the silos with no disruption to operational data and offers a variety of tools for users to access the unified model of the company's data across lines of business.

In short, Stardog is built to treat existing property graphs as another data silo within the Enterprise Knowledge Graph.



STARDOG UNION

Virtual Graphs

Query existing mixed and diverse databases, data sources, and data sets to create a powerful virtual graph in real time, leaving data and domain schemas in place. This flexibility conveys huge speed-to-benefit advantage and slashes ETL and data migration costs

Semantic Reasoning & Standards

Most advanced combination of logical reasoning, inference and rules integrated into the Knowledge Graph

Machine Learning

Create, train, and update models from Stardog's query language and solve one of the biggest problems of machine learning in the enterprise: speed

GraphQL

Load RDF and run GraphQL queries right away

Powerful Data Model

Supports a rich modeling language and user-defined rules

High Availability Cluster

Collection of server instances behave like a single instance for uninterrupted operations, redundancy and high query volume

BITES

Bring unstructured content in through external processors

CUSTOMER TESTIMONIALS

“Stardog is incredibly easy to use. I learned to launch the platform and begin integrating data sources in a single day.”

—Data Architect

We onboard data from all of the bank's back office systems... and convert it to higher level models in the Stardog Knowledge Graph. **It's like Google.**

—Senior Director/Architecture Fellow

Download Stardog now and see what we can do for you: fetch.stardog.com/download
Questions? Contact us: 1-202-408-8770 or sales@stardog.com

BNY MELLON

—Senior Director/Architecture Fellow