Stardog: Virtual graph, BI integration key to expanding enterprise knowledge graph interest

Analysts - Matt Aslett

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Introduction

When we last caught up with enterprise knowledge graph (EKG) specialist Stardog in August 2019, the company emphasized the importance of its virtual graph functionality in enabling enterprises to gain the advantages of knowledge graphs without having to move all relevant data into a graph database. The company now reports that its ability to connect and map the relationships between data in multiple underlying stores is a primary driver for growing interest in its Enterprise Knowledge Graph Platform, particularly with larger enterprises. Another new capability delivered since our last update that supports the company's overall data unification approach is support for greater compatibility with SQL-based business intelligence tools.

The 451 Take

While we have seen growing interest in semantic web technologies, we have previously noted that it remained a niche market with a select group of experts. As such, we see wisdom in Stardog focusing on the broader business advantages of EKGs, and the associated adjustment of both its sales force and its functionality. In particular, the BI/SQL Connector is a natural complement to the virtual graph functionality that lowers the barriers to adoption. We also previously noted that the larger the scale of EKG projects, the greater and more obvious the benefits, which highlights the wisdom of the company focusing on larger enterprises.

Details

Enterprise knowledge graph specialist Stardog was founded in 2006. It cut its teeth on the development of semantic web standards and semantic web projects for US government agencies, as well as its eponymous graph database.

This graph database and semantic web functionality remains important to Stardog's ability to enable customers to map enterprise information – and the relationships between that information – in an

EKG. Of growing importance, however, is the company's virtual graph engine, which enables the EKG to incorporate data from multiple underlying data stores, including relational and nonrelational databases, without the data having to be moved into the graph database.

Stardog reports that it is this functionality that is increasingly seen as a differentiator and is driving demand for EKG deployments based on its Enterprise Knowledge Graph Platform, particularly at large enterprises, on which it is increasingly focused.

Stardog has approximately 50 paying customers, which is the same number it cited during our previous update in August 2019. However, the company reports that the customer mix has changed since then, with a growing emphasis on larger customers and deals. It reported 76% growth from 2018 to 2019, and has grown its headcount to 68 from about 50 in August 2019.

Stardog has also adjusted its sales approach in recent months. While government remains a key revenue generator, the company is also seeing increasing business in verticals such as financial services, healthcare and life sciences, and manufacturing.

While the company was previously selling primarily to technical users of semantic web experts – and therefore preaching to the converted – it has hired a team of professional sales experts to target more senior decision-makers and influencers with a message based on the business benefits of EKGs. Furthermore, it is increasingly working with specialist partners to address opportunities driven specifically by semantic web.

The virtual graph engine is an important component is raising the level of conversation to the overall business benefits of EKGs since it enables EKGs built on Stardog's Enterprise Knowledge Graph Platform to incorporate data in other databases without needing to ingest the data into the Stardog graph database. In addition to databases, the company is also working to expand its range of connectors to applications (such as Salesforce).

The business-value positioning has taken a further step forward since our previous update with the delivery of Stardog's BI/SQL Connector, which flips the virtual graph functionality on its head by providing support for SQL-based business intelligence and visualization tools, enabling users to perform graph queries of data in the EKG without needing a custom user interface or expertise with the SPARQL query language.

The BI/SQL Connector is also compatible with Stardog's Inference Engine, which is another key component of the Enterprise Knowledge Graph Platform, and enables Stardog to perform inferencing across virtualized data sources at query time. Virtual Graph Transparency, introduced with version 7, is another important capability, which helps avoid the need to rewrite queries as data locations change.

Looking ahead, Stardog is poised to benefit from its involvement in the Linux Foundation's Cloud Information Model (CIM) project to create an application-agnostic data model that provides interoperability between cloud applications and services. Having joined the likes of Amazon Web Services and Salesforce in the project in February, Stardog delivered a CIM-compatible open source data model template in March to enable the development of knowledge graphs that incorporate data from multiple cloud applications.

Stardog has also expanded its funding since our last update, with an $11.4m series B round led by Tenfore Holdings, with Grotech Ventures, Boulder Ventures, Core Capital, Contour Venture Partners, Dcode Capital and Presidio Ventures participating, bringing total funding to $23m.

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