



Meet Stardog



Course Overview

Description:

- Learn how the Stardog Enterprise Knowledge Graph Platform can help organizations solve challenging data and analytics problems. This training will give you an overview of the platform and its key capabilities, and present ways to gain valuable insights from data using Stardog.

Audience:

- This training is for all Stardog Enterprise Knowledge Graph Platform users that consume information from the platform or who are responsible for using the platform in their organization.

Prerequisites:

- Students should have a basic understanding of Knowledge graphs.



Course Objectives

- 1 Review of knowledge graphs
- 2 Recognize key capabilities and when to use them
- 3 Gain an understanding of what the Stardog Enterprise Knowledge Graph Platform is and how it can be used within an enterprise
- 4 Provide examples of problems that can be solved using knowledge graphs



Agenda

Introduction

Meet Stardog

Review



Introduction

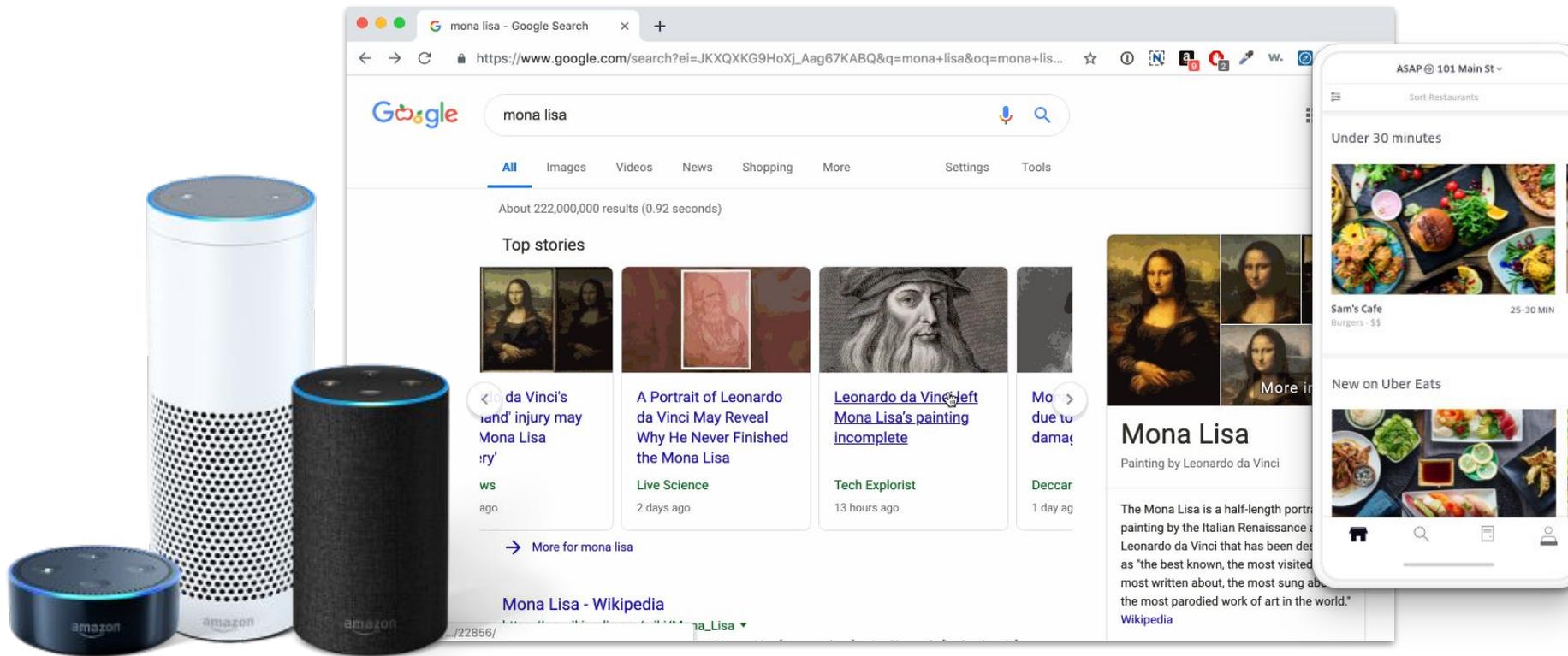


Students will be able to:

- 1 Review Knowledge Graphs
- 2 Discuss Enterprise Knowledge Graphs



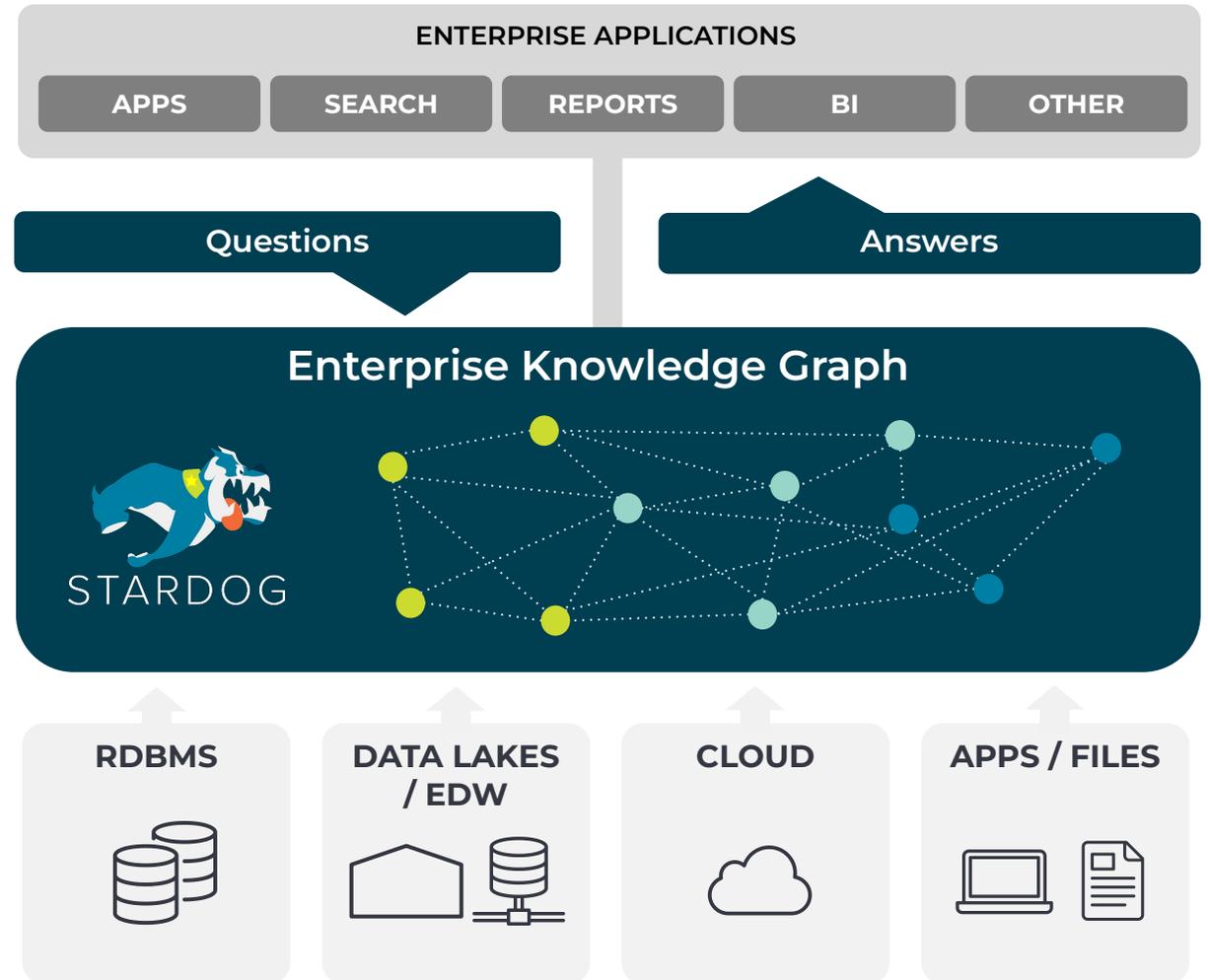
Knowledge Graphs Power Everyday Products



What is an Enterprise Knowledge Graph?

A flexible, semantic data layer for answering complex queries across data silos.

- **Connects** any data source / location and **virtualizes** access
- **Enriches** real-world context into data
- **Infers** new relationships, patterns and insights in data
- **Semantically searches** data by meaning



Meet Stardog



Students will be able to:

- 1 Identify key capabilities and when to use them
- 2 Understand what the Stardog Enterprise Knowledge Graph Platform is and who uses it within an organization
- 3 Explain how the platform fits within an enterprise



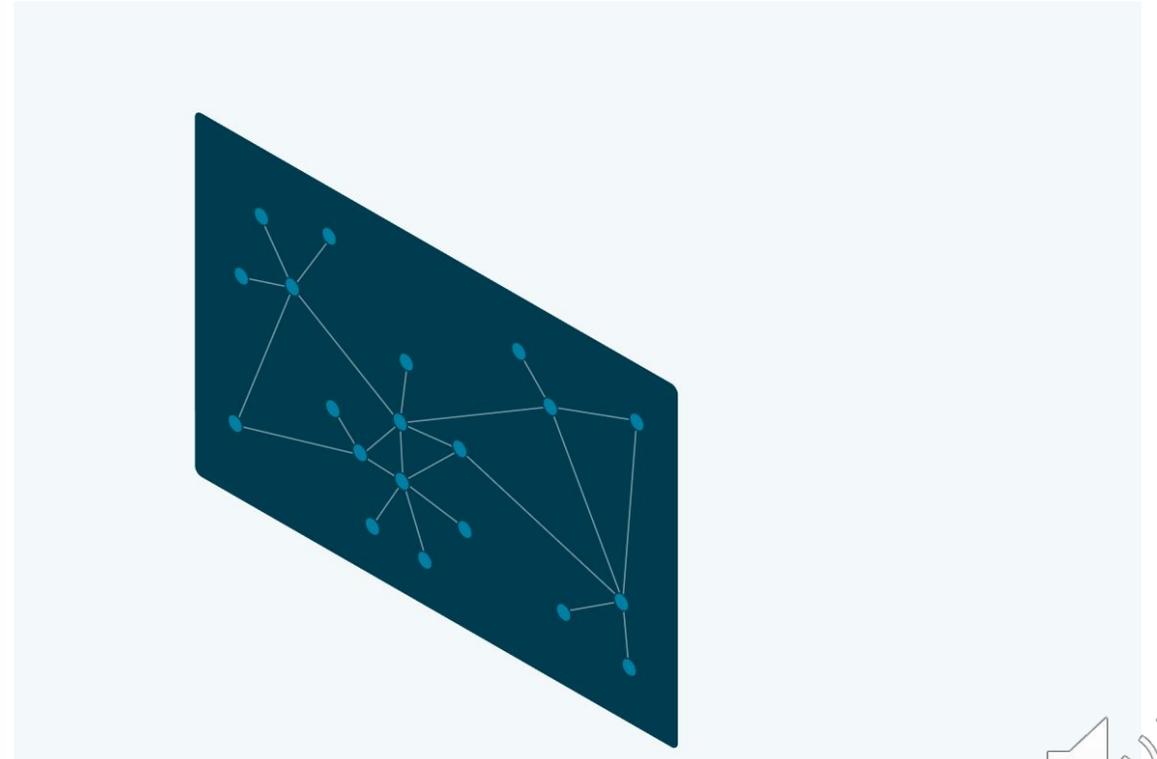
Key Capabilities

- Unified data with virtualization
- Metadata in action with catalogs feeding a seamless continuum
- Business logic as data with the Inference Engine
- Semantic RDF graph based on open standards
- Delivering knowledge back to your existing systems



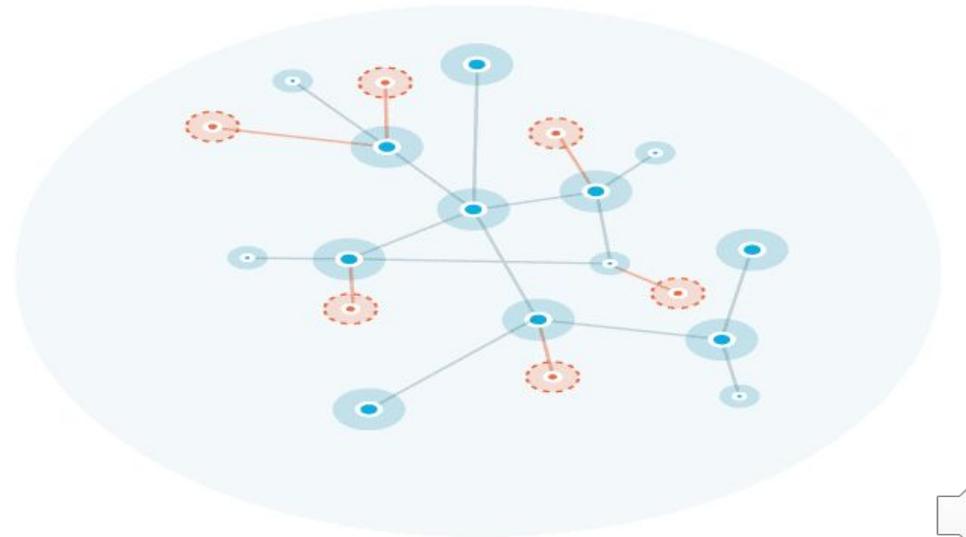
Unified data with virtualization

- **Broad Data Support** – Represent data from structured, semi-structured, and unstructured sources to create a uniform data layer
- **Real-time Connectors** – Access on-prem and cloud data to enrich the knowledge graph with more context
- **Flexible Tools** – Add sources and iterate quickly, decreasing time to value when responding to new data demands



Metadata in action with catalogs feeding a seamless continuum

- **Knowledge Catalog** – Unify enterprise metadata available in multiple data catalogs and/or data sources
- **Increase Findability** – Search, query, and explore available data assets for use in data-driven initiatives
- **Automated Discoverability**
 - Harvest existing metadata with pre-built integrations to Collibra, Databricks Unity Catalog, Microsoft Purview, and any JDBC-accessible source



Business logic as data with the Inference Engine

- **Define logic once** – Adds new nodes, relationships, and context
- **Real-time insights** – Inferences appear at query time
- **Schema Desynchronization** – Supports multiple stakeholders with different perspectives



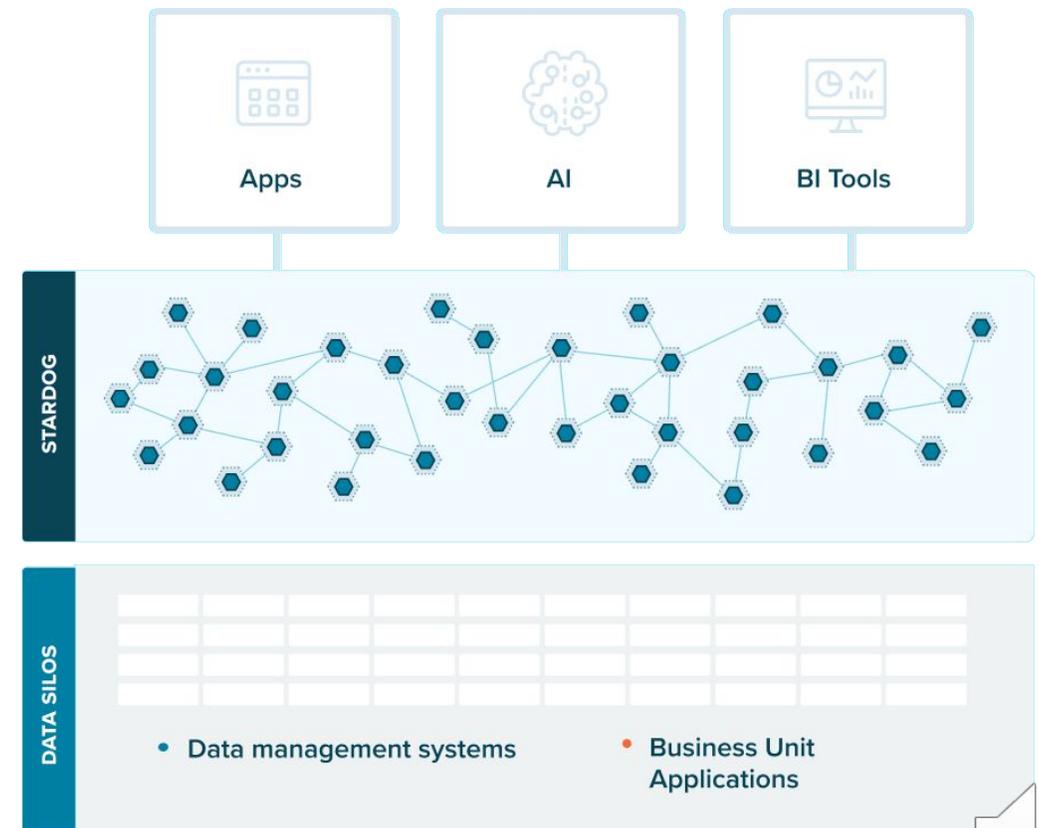
Semantic RDF Graph Based on Open Standards

- **Standards Based** – Different tools can be plugged into the stack
- **Data Representation** – Data is physically stored as composites of atomic triples versus distinct entities
- **Schema Desynchronization** – Data in semantic graphs is associated with a schema, not shaped by it – your modeling decisions are separate from data representation



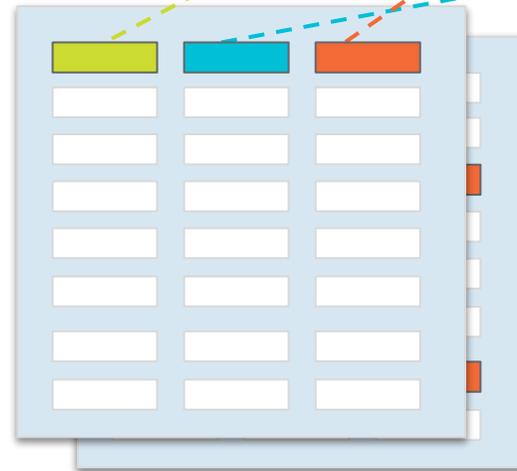
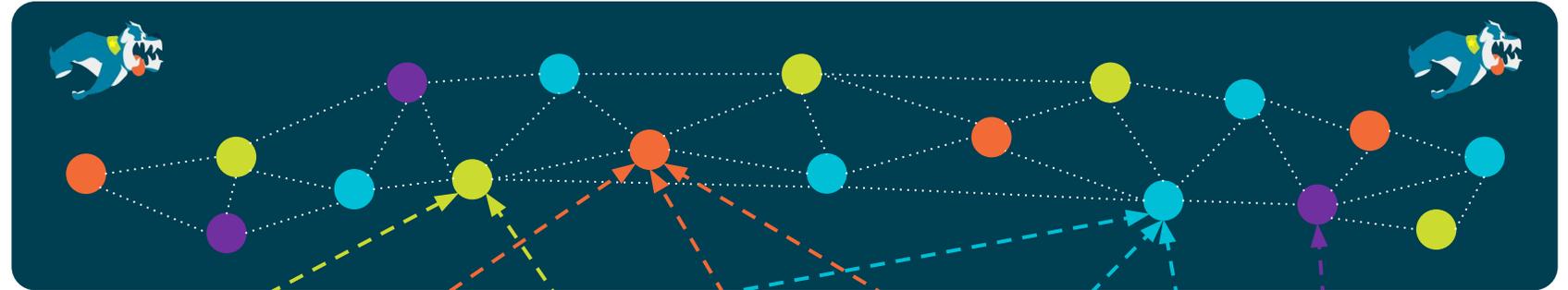
Delivering knowledge back to your existing systems

- **SQL Endpoint** – Connect Stardog to Tableau, PowerBI, Qlik, Domo, or any other SQL-based visual analytics tool to quickly build reports and dashboards
- **Programmatic Access** - Interact with Stardog via many common programming languages (e.g., Python with the pystardog library)
- **Customizable** – Add extensions to Stardog to implement your own custom query functions and more

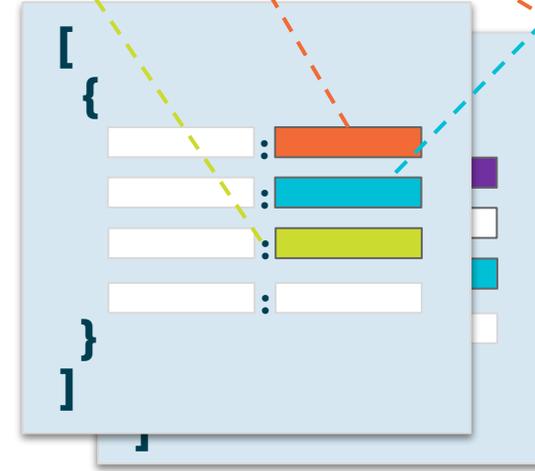


Example Knowledge Graph

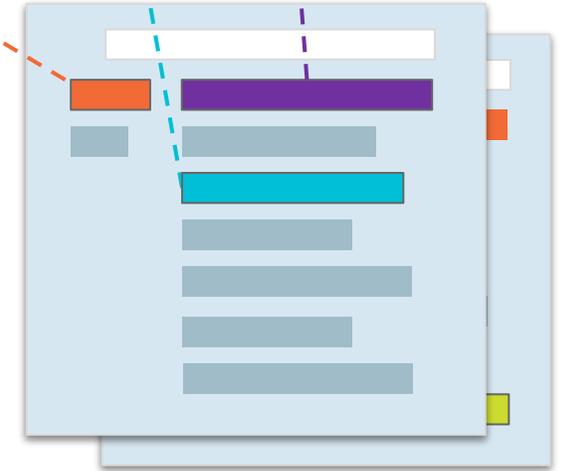
A knowledge graph leverages semantic graph technology with a declarative model to connect, query, and retrieve data.



Structured Data
Virtualized or Persisted

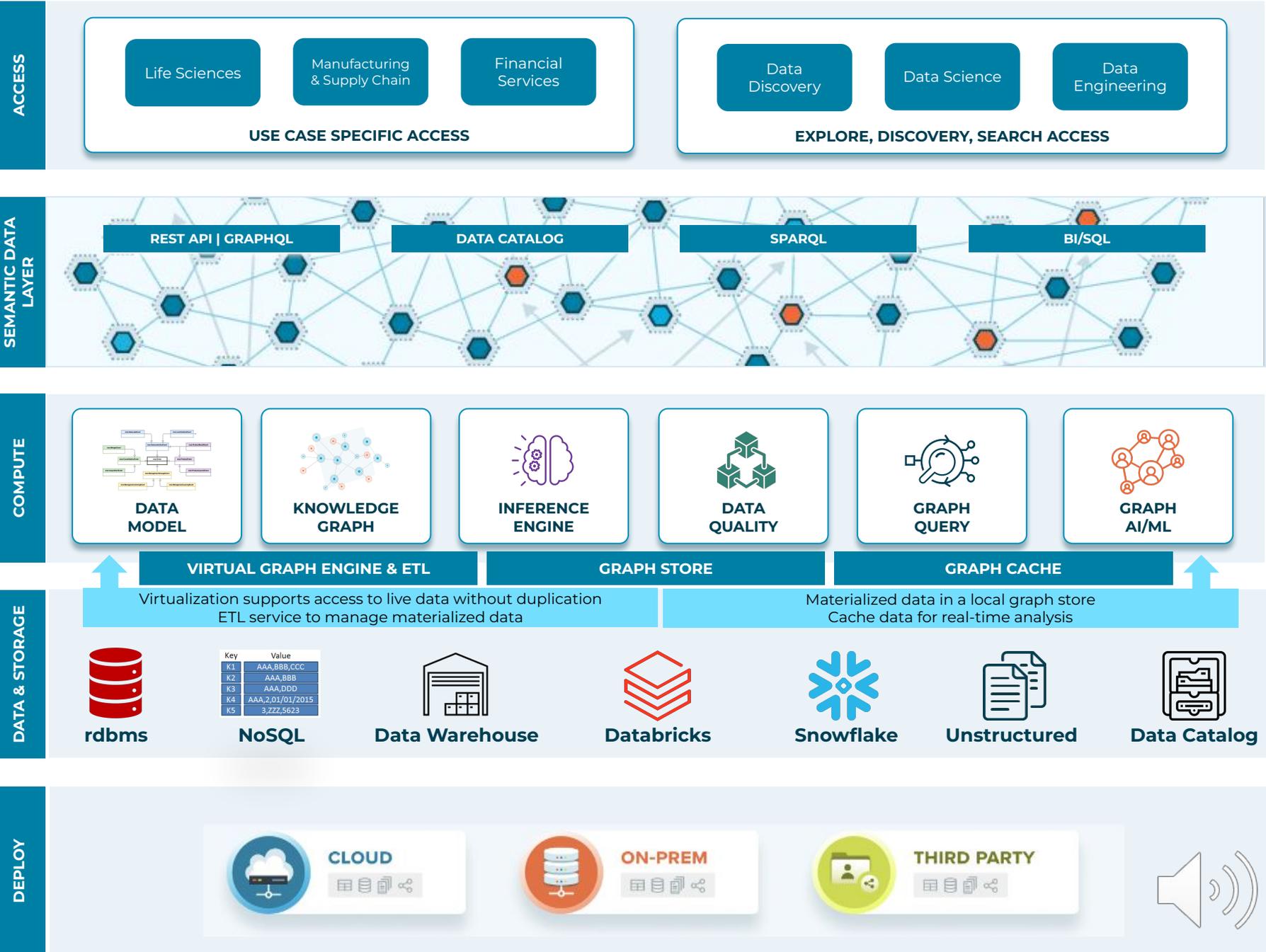


Semi-Structured Data
Virtualized or Persisted



Unstructured Data
Extraction & Linking

Stardog in the Enterprise

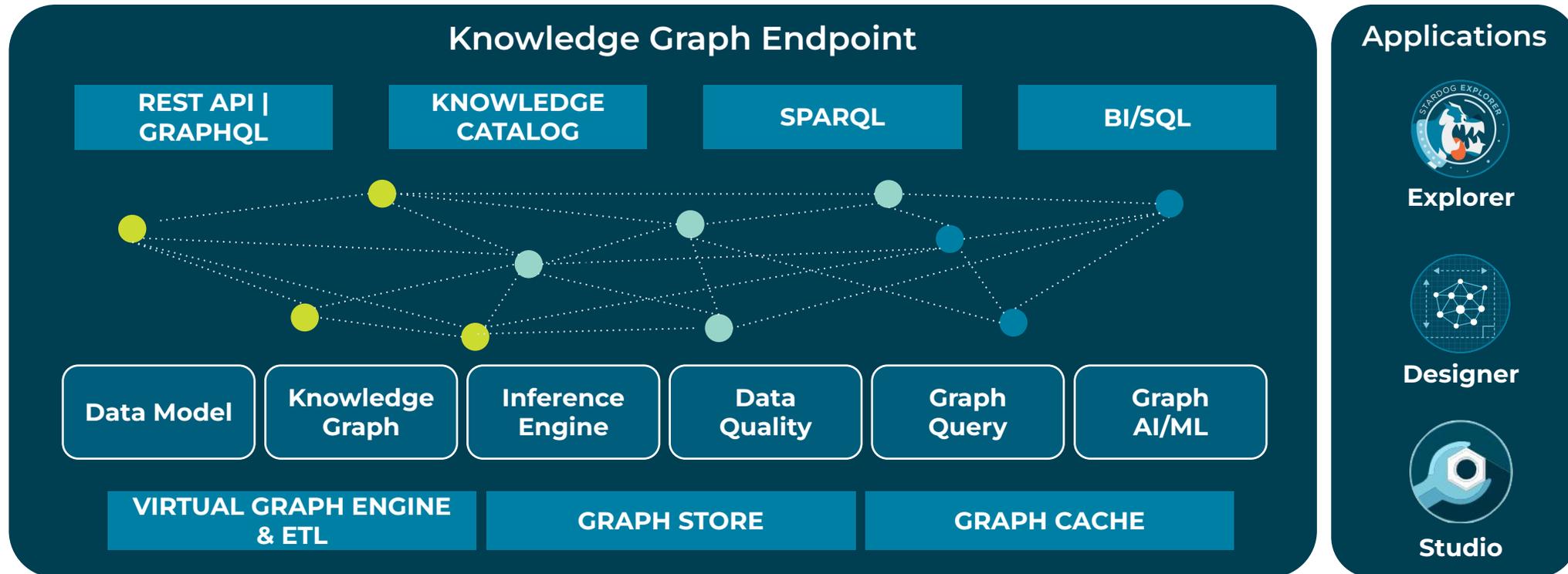


Platform

- Platform Overview
- Cloud
- Designer
- Explorer
- Studio

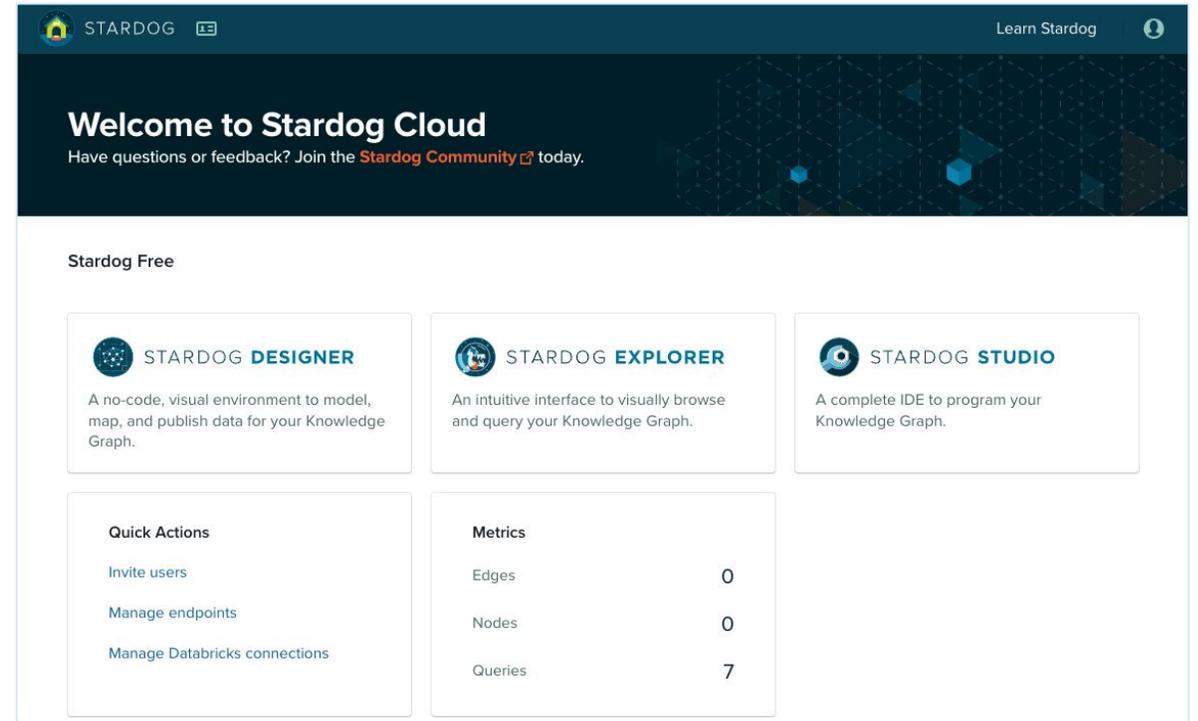


Stardog's Enterprise Knowledge Graph Platform



Stardog Cloud

- Manage Knowledge Graph endpoints
- Launch applications
- Sign up for Stardog Cloud plans
- Access Resource Center for guided journeys and training resources
- Invite more users



The screenshot shows the Stardog Cloud dashboard for a 'Stardog Free' account. The top navigation bar includes the Stardog logo, a menu icon, and a 'Learn Stardog' link with a user profile icon. The main header area features a 'Welcome to Stardog Cloud' message and a link to the 'Stardog Community'. Below this, three application tiles are displayed: 'STARDOG DESIGNER' (no-code environment), 'STARDOG EXPLORER' (visual interface), and 'STARDOG STUDIO' (IDE). At the bottom, there are two summary boxes: 'Quick Actions' with links to 'Invite users', 'Manage endpoints', and 'Manage Databricks connections'; and 'Metrics' showing 0 Edges, 0 Nodes, and 7 Queries.

Metrics	
Edges	0
Nodes	0
Queries	7



Stardog Applications



STARDOG DESIGNER

A no-code, visual environment for creating and maintaining your Knowledge Graph.



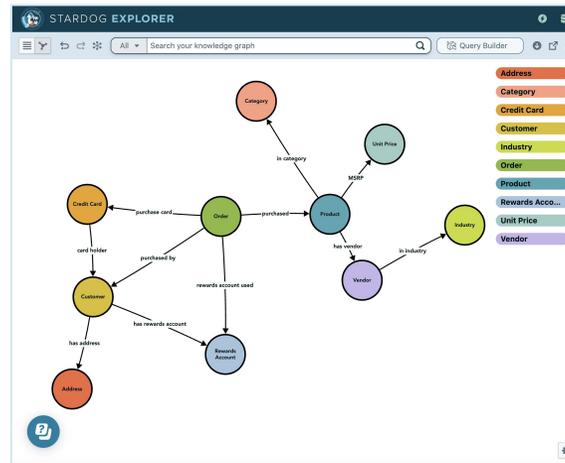
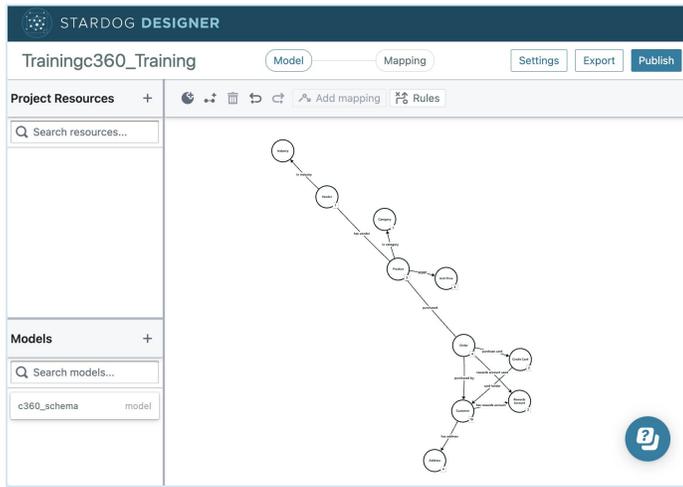
STARDOG EXPLORER

Search and Explore your Knowledge Graph; find answers to questions in an intuitive interface.



STARDOG STUDIO

The IDE of Knowledge Graph: For KG Engineers building on, and operating, Stardog.



The screenshot shows the Stardog Studio interface. The left sidebar displays a list of databases: 'catalog' (Triple Count: ~517) and 'Trainingc360_HL' (Triple Count: ~48K). The main workspace shows the 'Admin' tab for the 'Trainingc360_HL' database, with options for 'Namespaces', 'Properties', 'GraphQL Schemas', and 'BI Mapping'. The 'Running Queries' section shows '0' queries. Below, there is a section for 'Label Predicates for IRIs in Search and Visualizations' with a text input field containing 'rdfs:label' and '<http://purl.org/dc/elements/1.1/title>'. The 'Other Actions' section includes buttons for 'Optimize', 'Load Data', 'Remove Data', 'Export Database', and 'Drop Data'.



Stardog Application User Roles

User Roles	Designer	Explorer	Studio
Consumer - Marketers, customer success managers, salespeople, analysts, and others		●	
Modeler - Data ontologists, data librarians, data architects, and other data-planning experts	●	●	●
Builder - Data engineers, data scientists, developers, and other tech data experts	●	●	●
Administrator - System and database administrators			●
Operator - Operations experts responsible for hardware and performance			●



Unlocking Enterprise Value

- Enterprise initiatives
- Industry Use Cases
- Return on investment



Powered By Enterprise Knowledge Graphs

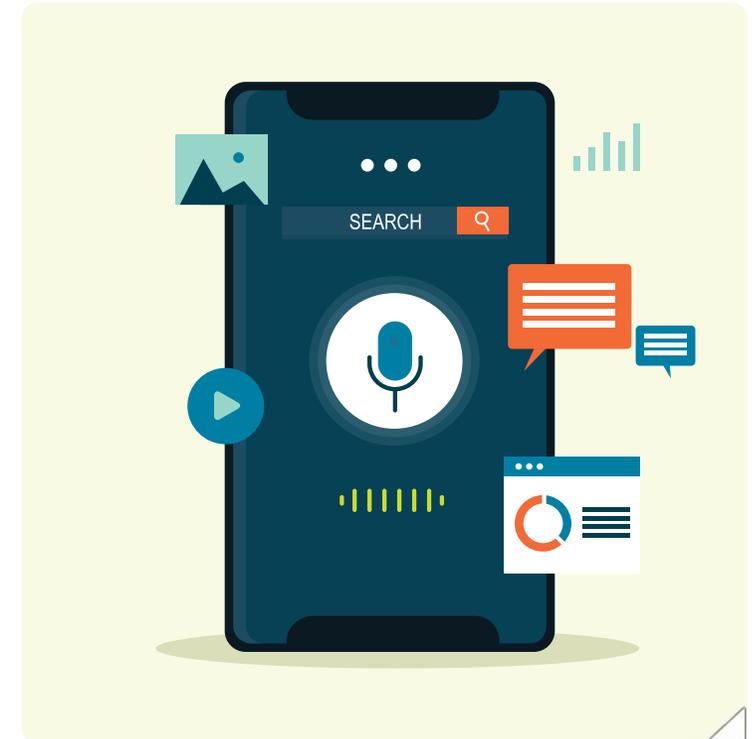
Data Lake Productivity



Analytics Acceleration



Semantic Search



Data Unification Challenges

Solved with a
Semantic Data Layer
Powered by Stardog

Life Sciences

Gene Research



Drug Study Analysis



Clinical Trial Analysis



Manufacturing

Quality Analytics



Digital Twin/Thread



Supply Chain



Financial Services

Know Your Customer



AML & Fraud



Operational Risk



ROI analysis of Stardog's value proposition

Delivered
\$9.8mm in benefits
over 3 years
resulting in
320% ROI

Improved Productivity of Data Scientists and Data Engineers:

Improved productivity of data scientists by 75–95% or **\$3.8 million** in benefits.

Faster Analytics Development: Analytics innovations were completed **2 to 3 times faster** with Stardog compared to using traditional relational or other graph technologies.

Infrastructure Savings: saved **\$2.6 million** in data infrastructure costs from avoided copying and moving data and improved query performance on lower-cost hardware.

Increased Profits: made **\$2.4 million** from analytics projects due to enhanced quantity, quality, and speed of insights with Stardog to unlock new business opportunities.



Review



Lets Review...

- 1 Reviewed knowledge graphs
- 2 Discussed Stardog key capabilities
- 3 Discussed the Stardog EKG Platform and how different types of users interact with Stardog
- 4 Ways to unlock enterprise value using Stardog



Question: Which of these is a key capability?

- A. Knowledge graphs
- B. Unified catalog with virtualization
- C. SPARQL queries

Answer:

- B. Unified catalog with virtualization



Question: Which application is used to build a data model and map resources?

- A. Studio
- B. Explorer
- C. Designer

Answer:

- C. Designer



Thank You!

Tell us what you think by filling out a survey:
<https://www.surveymonkey.com/r/PostCourseVideo>

To contact Stardog about training please email:
training@stardog.com





STARDOG