THINGSPAN™

THE ENTERPRISE GRAPH PLATFORM FOR ANALYTICS AT SPEED AND SCALE

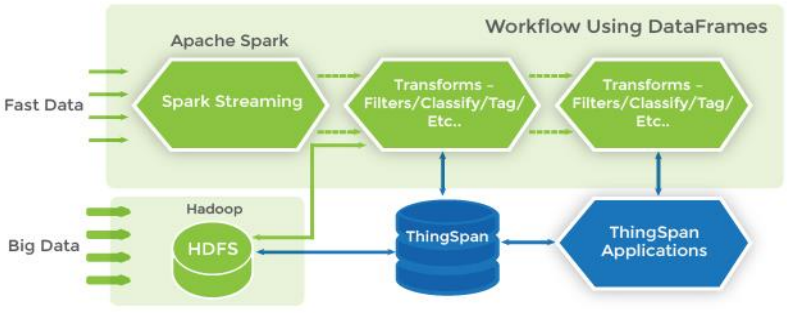
Discovering the Unknown Connections with ThingSpan

The Objectivity ThingSpan product is an enterprise-grade, massively scalable distributed platform for graph analytics and real-time relationship discovery. Instead of analyzing a single data source, a ThingSpan application can analyze the connections across multiple data sources in real-time. The key benefits of ThingSpan are its navigational and pattern-finding capabilities coupled with speed and scalability. ThingSpan is integrated with industry-standard open source technologies like Apache Spark, Kafka, YARN and Hadoop, which ensures cost-effective scale-out on commodity clusters.

While most applications running on Big Data platforms rely on batch processing, which can take from hours to days, ThingSpan-based applications collect and interpret data in real-time, while simultaneously analyzing new information against an organization's existing data.

This next-generation platform provides optimal speed and processing power for ingesting data from a wide variety of structured and unstructured sources and analyzing relationships in-store to uncover value from time-sensitive data. With its hierarchically-structure, ThingSpan enables organizations to easily discover patterns and associations within Big Data archives and streaming, real-time data from Internet of Things sensors or other streams. As new data is collected, it is immediately analyzed against existing queries, so that there is no delay in taking necessary actions and receiving valuable insights. Ingest and analytics can occur in parallel.

ARCHITECTURE DIAGRAM



THINGSPAN™

PRODUCT OVERVIEW

• **ThingSpan, the enterprise graph platform for analytics at speed and scale,** is a powerful, distributed graph platform that enables faster processing and higher performance.

• **Native support of the Big Data ecosystem**

Architected to support industry-standard, open-source technologies, ThingSpan leverages these key Apache platforms: **Hadoop, Apache Spark, Kafka,** and **Yarn.**

• **Rapid navigation and pathfinding queries**

ThingSpan uses Apache Spark to collect and analyze real-time streaming data, instantly triggering actions when required.

• **Organize highly interconnected data by relationships**

ThingSpan enables organizations to map out the connections between data points in real time, making it possible to immediately apply advanced graph analytics.

• **DO query language**

ThingSpan's new DO query language is incredibly expressive, giving users a powerful new tool to query and manipulate new kinds of data in the graph.

- DO is an easy language to use to formulate queries for pattern discovery
- DO's simple, quick and easy interface allows data scientist to query data without having to write or compile code
- DO extends the SQL like query with graph navigation capabilities
- DO enables both value based queries as well as complex graph queries

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THINGSPAN COMPONENTS

• **ThingSpan for HDFS**

ThingSpan adapts Hadoop's HDFS environment for simpler, high-speed data processing and analysis.

• **ThingSpan for Apache Spark**

Adapters for Spark enable users to manage Spark DataFrames and convert ThingSpan-collected data to Spark components, such as SQL and MLlib.

• **ThingSpan Metadata Store**

The metadata store enables users to pre-define metadata schemas to define relationships between data.

• **ThingSpan Rest API**

ThingSpan's Rest API provides a simple interface for defining traditional and graph queries.

High-Speed Performance Beyond Petabyte Volumes

ThingSpan ensures superior performance by organizing data about people, locations, events, and devices, into real-world objects. This allows information about associations to be persisted, eliminating the cost-prohibitive inefficiency of constantly joining queries across different data tables as required in traditional relational databases.

ThingSpan's graph analytics makes it faster and easier to create systems capable of managing data volumes well beyond the petabyte level. Now organizations can transform data from generic to relevant in real-time, thereby maximizing business value.

Objectivity®

About Objectivity, Inc.

Objectivity, Inc. delivers massively scalable and highly performant graph analytics platforms that are proven to power mission-critical applications for the most demanding and complex datasets. With a rich history of serving Global 1000 customers and partners, Objectivity holds deep domain expertise in fusing vital information from massive volumes of data and sources to discover unknown connections at speed and scale. Objectivity's technology enables enterprises to make better decisions with precision, scale and efficiency. Objectivity is privately held with headquarters in San Jose, California. Please visit www.objectivity.com to learn more.

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