Combining the Flexibility of Knowledge Graphs with the Power of Semantic Tagging: The Enterprise PowerPack

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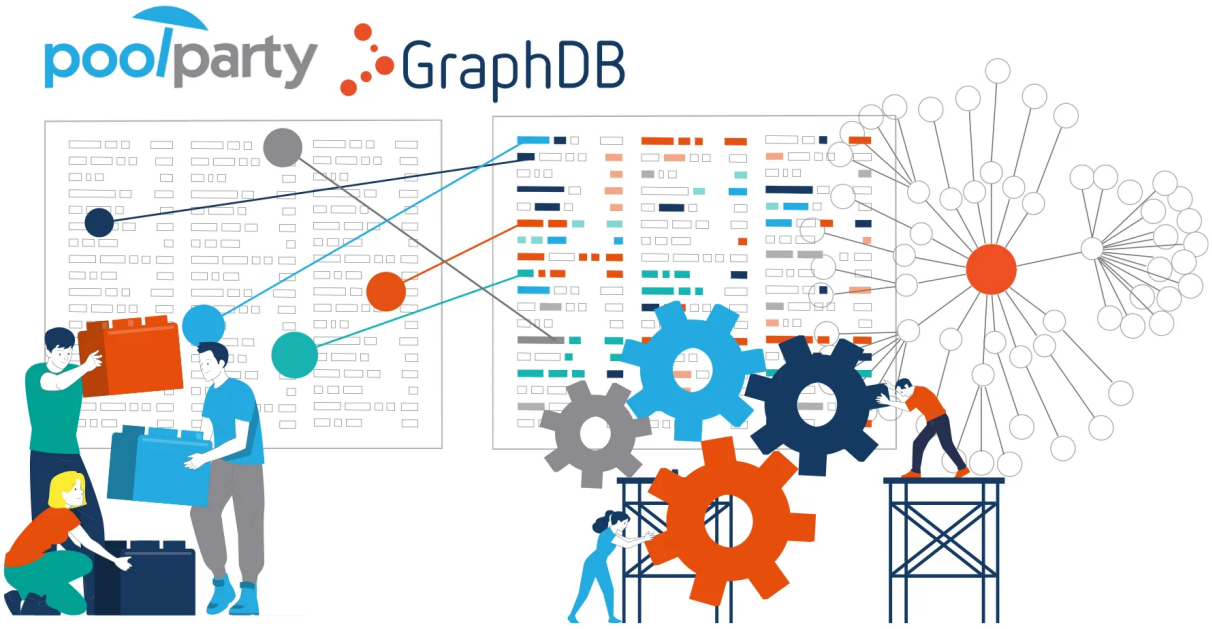
Graph technologies are essential for managing and enriching data and content in modern enterprises. But to develop a robust data and content infrastructure, itвЂ™s important to partner with the right vendors. A great partner ecosystem is the key to covering the requirements of end-to-end solutions and rolling out knowledge graphs at scale.

The collaboration between Semantic Web Company (SWC) and Ontotext has deepened over the years and by complementing our strengths, we deliver greater value for our customers. We offer a seamless integration of the PoolParty Semantic Suite and GraphDB, called the PowerPack bundles. This enables our customers to work with a rich, user-friendly toolset to manage a graph composed of billions of edges hosted in data centers around the world.

As a result, enterprises can fully unlock the potential hidden knowledge that they already have. The blend of our technologies provides the perfect environment for content and data management applications in many knowledge-intensive enterprises. Our two products work exceptionally well together as GraphDB is a development tool, whereas PoolParty is an out-of-the-box product delivering optimal results with minimal configuration.



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Why PoolParty and GraphDB PowerPack Bundles?

The idea behind the bundles is to efficiently store, query, and manipulate complex interrelated data and make it available in an enterprise architecture. The PoolParty and GraphDB PowerPack Bundles can help organizations with various challenges and the following list outlines some of them:

- Easily locate the right content
- Find search terms needed for extraction
- Introduce recommendations while searching
- Introduce a central content model
- Avoid increased duplication and content redundancy
- Enable easy management of unstructured data

So, there is a very diverse value proposition as to why a company would be interested in the PowerPack offering.

PowerPack Bundles вЂ“ What is it and what is included?

We offer two different PowerPacks вЂ“ Agile Data Integration and High-Performance Tagging. Now, letвЂ™s see what is included in each of them.

The High-Performance Tagging PowerPack bundle

The High-Performance Tagging PowerPack is designed to satisfy taxonomy and metadata management needs by allowing enterprise tagging at a scale. The bundle focuses on tagging documents from a single data source and makes it easy for customers to build smart applications or support existing systems and processes. It comes with significant cost advantages and includes software installation, support, and maintenance from one convenient source for the full bundle.

Some use cases that can especially benefit from this PowerPack are building semantic or faceted search for the enterprise, introducing content personalization, offering

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recommendations, and business intelligence. So, by implementing the bundle, customers will enjoy quick access to relevant content for all employees, enhanced user experience, and improved strategic decision-making.

There are various benefits that The High-Performance Tagging PowerPack offers. Customers can take full advantage of an information environment enriched with semantics. This means that under the hood, there is a centralized taxonomy management that also contributes to the consistency of data standards. On top of an improved user experience, it also enables seamless collaboration of workflows. Another important benefit is that the High-Performance Tagging PowerPack is easy to integrate with existing systems, which minimizes IT involvement and lowers the costs associated with it.

The automatic tagging specifically helps ensure consistency, which generates better data quality and deeper analytics and reporting. To top it off, the bundle comes with two prepackaged WAND taxonomies, which help organizations avoid the вЂњcold start problemвЂќ. If they donвЂ™t have a readily available domain taxonomy, itвЂ™s practical to have this option.

In a nutshell, this bundle enables companies to manage tags in PoolParty as an enterprise taxonomy system. This brings improved consistency in the relationships between tags and naming conventions. PoolParty also ensures that developing, publishing, or connecting content goes smoothly by making it easy to create tags with more precision. GraphDB, on the other hand, allows for document annotation with SPARQL against third-party services and translates annotations to RDF.

The Agile Data Integration PowerPack bundle

The other bundle is the Agile Data Integration PowerPack. Unlike the High-performance Tagging PowerPack, which manages documents coming from a single source, it enables data integration from different sources. It helps enterprises unite different data silos and allows them to manage all digital assets from one place. This bundle also comes with significant cost advantages and covers software installation, support, and maintenance from one convenient source.

This PowerPack can benefit a larger variety of use cases including semantic and faceted

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search, content personalization and recommendations, business intelligence, data fabric, and many other scenarios. By implementing the Agile Data Integration PowerPack, customers can enjoy quick access to relevant content for all employees company-wide, ensure a great user experience, and promote strategic decision-making.

Among the main benefits of this bundle is the ability to manage all digital assets in one place, avoiding intensive data migrations. The linking of resources and business objects together is much more flexible. One can influence how findable information can be in a database or a search platform with standardized terminology. In addition, companies can now create actionable data by using automated tagging and can encourage collaboration and synergy between employees and departments. Another benefit is that anyone can update and link data with minimum training.

In a nutshell, connecting data across different databases in an enterprise is often a labor-intensive, expensive process involving complex migrations. Thanks to GraphDB, there is no need to replicate data. This allows the creation of multiple repositories for every virtualized database and uses internal federation to query them and mix native databases with SQL databases. Also, as PoolParty is a semantic middleware for linking and integrating datasets by applying semantic knowledge models, companies can completely avoid these labor-intensive migration challenges.

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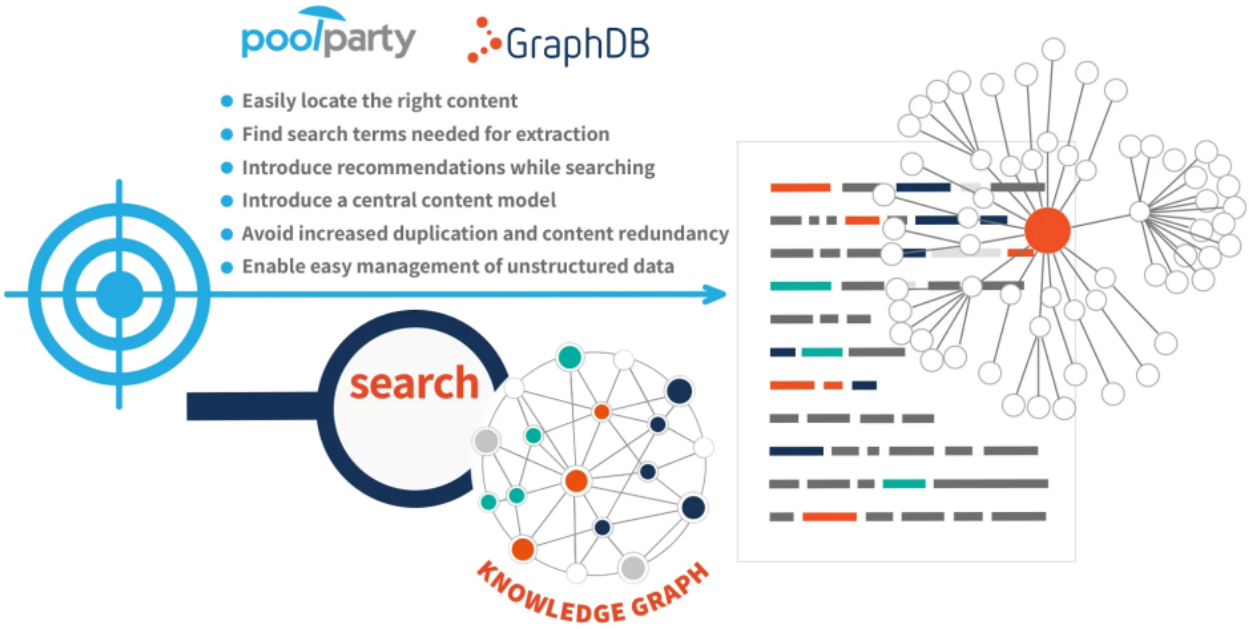

Success stories

Now, letвЂ™s take a look at some of the customer success stories.

Skills and competence knowledge management

JobTeaser is a career portal that mentors applicants to make the best profile and find jobs that fit their criteria. To create a match between a user and the most accurate profile, their platform considers multiple aspects, including psychology, salary expectations, skill profiles, job descriptions, and so on. With such a diverse baseline, JobTeaser requires a sophisticated semantic approach that integrates multiple facets of data to create a controlled vocabulary of skills and careers.

Wildlife intelligence

The next customer success story is with Sensing Clues вЂ“ a nonprofit organization focused on uncovering wildlife intelligence with taxonomy management. PoolPartyвЂ™s solution

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helped deliver a suite of tools that track the movement and patterns of illegal poaching activities across the globe. In this way, field rangers can make notations about the wildlife and all surrounding areas using a taxonomy of activities and observations.

Before using PoolParty, Sensing Clues struggled to model their knowledge domain because of the multilingual and complex scientific terminology, which was required. However, with the help of GraphDBвЂ™s vast collection of concepts, now Sensing Clues could easily create a pragmatic thesaurus of terms, and in turn, empower the tracking capabilities of the Sensing Clues wildlife tool suite.

Industrial operations space

Our next customer is a global provider of electrical engineering and software equipment related to the machinery industry. Before using the High-Performance Tagging PowerPack bundle, they had shift handover reports between employees at their production plants. These resulted in either inaccurate or missing information or information not delivered on time. This impacted the safety conditions of the plant and the people who worked in it.

By using the PoolParty and GraphDB data cluster, however, our customer was able to build an operation management knowledge graph, which mapped flags or errors in technical equipment. This gave employees a 360-view of their workspace, which made them better informed about the conditions and able to fix them faster.

Research field

Another customer is a research firm that gives users access to information, data, and trends concerning digital businesses. Their taxonomists struggled to manually update the research taxonomy with new topics and related items. As a result, their users had a poor search experience on the front-end.

By working with GraphDB and PoolPartyвЂ™s easy-to-use taxonomy management tool, these taxonomists could seamlessly update their taxonomy with new information. This allowed them to build a powerful semantic search engine that served users useful information a lot quicker. Now, the search results match the user intent and the suggested related results are based on the terms in the taxonomy.

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Health sector

HealthDirect Australia is another success story we want to share. ItвЂ™s the main national public health information service in Australia. By using a thesaurus, they have been able to make an intelligent Symptom Checker. It helps Australian citizens determine what they should do about their symptoms based on the recommendations the platform provides.

The symptoms, the diseases, and the actions are all located in the backend as interconnected knowledge. It maps items to each other to deliver the best action plans for the person checking their symptoms. On top of the action plans, the recommender system can show user-related pages, key facts about a particular disease or symptom, and further subject reading.

Information services

Another great example is Wolters Kluwer вЂ“ a leading publisher of professional information services in the legal, healthcare, accounting, and compliance sectors. Their data was previously stored in XML format and could not be easily updated by the subject matter experts. This affected the metadata quality and the ability to publish data on time.

By using PoolPartyвЂ™s taxonomy server and GraphDBвЂ™s triplestore, our customer transformed their data management processes. They were able to build a thesaurus fit for the companyвЂ™s complex and demanding use case. The new thesaurus is also multilingual and collaborative for their international offices.

Key takeaways

Having a great and functioning partner ecosystem is the key to rolling out knowledge graphs at scale and the PowerPack bundles we just explored are the result of our great partnership with Ontotext. The offering has a great foundation in the well-established integration between our two products вЂ“ PoolParty and GraphDB.

The resulting bundles enable our customers to efficiently store, query, and manipulate complex data, manage digital assets in one place, and ensure the best value for money ratio.

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All the success stories we outlined show that the PowerPack bundles have helped build cutting-edge natural language processing solutions for our customers.

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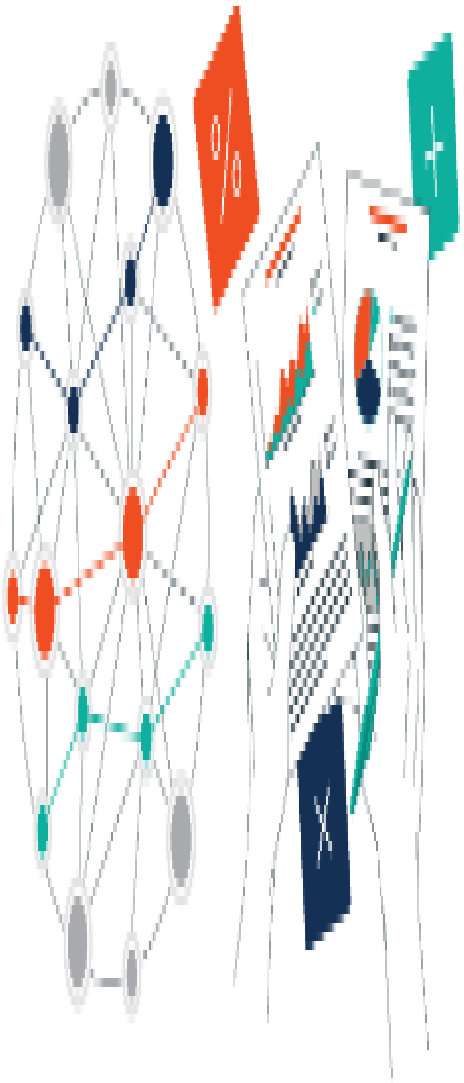
Does this resemble your use case?

Book a Discovery Call



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