Precision search across billions of simulation datasets

iFinder accelerates engineering workflows in the manufacturing industry

A global technology company in the manufacturing industry is optimizing the way it handles complex simulation data with IntraFind's iFinder. Engineers can now locate relevant results and parameters within seconds, significantly reducing development time.

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The challenge: Data overload in simulation

As a global technology and service provider, the company is continuously striving for innovation. The department responsible for developing and providing simulation management tools and services generates vast amounts of valuable data every day. Modern product development would be unthinkable without simulations - they enable teams to test and optimize products and identify errors before physical prototypes are built.

This simulation data is typically stored in scalable cloud environments such as Azure Blob Storage. The associated metadata, which contains key information about the simulations—e.g., parameters, results, versions, creators—is often kept in separate databases such as MongoDB.

For the engineering teams, this meant that finding the required simulation results or configurations quickly and accurately amid this vast amount of data was both difficult and time-consuming. A central, intelligent search solution was missing - reducing efficiency and slowing the pace of innovation.

The solution: iFinder as an intelligent data interpreter

With the enterprise search software iFinder from IntraFind, the company gained a powerful search solution for quickly and accurately utilizing complex simulation data.

1. Customized connector for heterogeneous data sources
The Azure Blob Storage connector, specially developed by IntraFind, indexes large volumes of data and intelligently connects it with metadata. This creates a uniform, searchable information base.

2. Seamless integration
The powerful iFinder search bar was integrated directly into the existing internal web portal. This ensures intuitive user experience and makes searching an integral part of the engineers' daily work processes.

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Project overview

Customer: International provider of industrial manufacturing and development technologies

Industry: Manufacturing, engineering, research & development

Challenge: Efficient search and access to complex simulation data and its metadata in a cloud environment

Solution: IntraFind iFinder with project-specific Azure Blob Storage connector and integrated search bar

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3. Secure authentication
The implementation of secure user authentication was a MUST criterion in order to control access to sensitive simulation data and meet all compliance requirements.

4. Cloud-based implementation
The installation was carried out directly on the production system in the company's cloud, which underlines the efficiency of the implementation and maximizes the direct benefits for the customer.

The added value

+ Massive increase in efficiency in research and development
Engineers can find simulation results, parameters, or test series within seconds rather than hours.
This speeds up the entire development process.

+ Optimized use of valuable data
The intelligent linking of simulation data and metadata makes the entire wealth of knowledge from simulations accessible. This prevents similar simulations from being unnecessarily repeated and ensures developers always have access to the most up-to-date and relevant information.

+ Faster innovation cycles
Faster access to knowledge accelerates insights and decision-making processes. Engineers can test hypotheses, analyze errors, and develop new solutions more efficiently, significantly reducing time-to-market.

+ Improved knowledge management
iFinder creates a central, searchable repository for all simulation data and its context. This promotes knowledge sharing within the team and across departmental boundaries.

+ Security and control
Configured user authentication guarantees data security and compliance in sensitive engineering contexts.

+ Scalability for future growth
The solution grows flexibly with increasing data volumes and remains powerful even with billions of documents.

Conclusion
iFinder – The key to data intelligence in engineering

With iFinder, the company has introduced an intelligent, scalable search solution that fully exploits the potential of its simulation data. This significantly shortens development cycles and reduces redundant work – a true boost for innovation.

About IntraFind

IntraFind is a leading German software provider for intelligent enterprise search, text analytics, and generative AI solutions. For more than 20 years, we have been helping companies and public sector organizations to access and use knowledge quickly, securely, and efficiently – serving customers across all industries, from mid-sized businesses to global enterprises.

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