

Tetra Scientific Data Cloud for Scientific IT

GUIDE

Life science IT across R&D, Quality, and Manufacturing need efficient data collection, management, and distribution, but face challenges:

- Data scientists and scientists rely upon data scattered across disconnected silos (instruments, applications, data warehouses), making it hard to locate, utilize, and reuse scientific data
- Creating and maintaining point-to-point integrations is time consuming, creates a fragile infrastructure, is not scalable, nor is it future-proof
- Building an in-house data solution poses significant resource challenges, especially when developing and maintaining custom integrations across an entire organization

The Tetra Scientific Data Cloud™ addresses these challenges by seamlessly moving data between instruments and informatics applications without the need for customized integrations. Meanwhile the data is automatically enriched and standardized, making it findable and accessible for users while being interoperable and reusable within advanced analytics and visualization tools, including AI/ML.



Centralize data through productized integrations

- Automate data collection from instruments, informatics programs, and sensors
- Eliminate disconnected data silos and centralize all the data needed by scientists and data scientists



Increase flexibility and reduce costs

- Incorporate new technologies (such as lab instruments, informatics software, sensors, etc.) without the need for new, custom solutions that are expensive to build and maintain
- Scale to meet data and processing needs with a cloud-native solution, eliminating data center management costs



Automate data harmonization and enrichment

- Eliminate vendor lock-in with Tetra Data, an open, vendor-agnostic, data standard
- Automatically add metadata to gain historical provenance and make data easier to find

Before TetraScience	After TetraScience
<p>Scientific data is spread across disconnected silos, making it difficult to manage and access</p>	 <p>All scientific data is centralized in the cloud where it is easily findable through an intuitive search</p>
<p>Connecting each lab instrument and application requires a custom, point-to-point solution that is expensive to build and maintain</p>	 <p>Productized integrations eliminate direct connections and simplify the incorporation and maintenance of new technologies</p>
<p>Numerous proprietary formats require time-consuming, manual processes to transform and standardize data</p>	 <p>Automated harmonization allows data to be used by essentially any instrument, informatics application, and analytics tool</p>
<p>Manual data collection and transcription introduces errors and increases the difficulty of ensuring data integrity</p>	 <p>Automated processes eliminate human errors while audit trails provide a complete data history across workflows</p>

The Tetra Scientific Data Cloud is the world's only solution that provides centralized data access, flexibility to incorporate new technologies, and automated enrichment and standardization in a scalable, secure, cloud-native environment. With these capabilities, scientific IT departments can modernize their scientific data solutions and get data to their teams quickly and efficiently.



TetraScience is the Scientific Data Cloud company with a mission to transform life sciences, accelerate discovery, and improve and extend human life.

To learn more about how the Tetra Scientific Data Cloud can help scientific IT departments streamline data processing, visit tetrascience.com.

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