



Genesis Mission Data Team

The data team builds a continuously evolving data ecosystem that curates, connects, and prepares Department of Energy (DOE) and National Nuclear Security Administration (NNSA) data for accelerated discovery and national security. It transforms DOE and NNSA's extensive experimental, simulation, product realization, and operational datasets into resources that strengthen the Genesis Mission's reasoning, modeling, and decision-making capabilities.

What the Team Delivers

Foundational Data Framework

The data team establishes a scalable data foundation that integrates scientific data across various environments, facilitating efficient data sharing while ensuring provenance and quality. It creates a governed environment where datasets are curated, traceable, and discoverable.

Automated Curation and Transformation

The data team develops mechanisms to convert raw scientific and engineering data into usable resources through automated and human-guided processes. These capabilities are intended to improve data consistency and trust while preserving scientific integrity and reducing the effort required to prepare data for analysis and artificial intelligence (AI) workflows.

Federated Data Governance

The data team is standing up a federated governance model to enable responsible data use across the Genesis Mission. This includes fine-grained access control, licensing, auditability, and digital provenance. The goal is for data to carry

traceability information that supports reuse, verification, and reproducibility, while balancing accessibility with protection requirements.

Interoperability and Standards

Interoperability is a key design principle, with standardized interfaces enabling data sharing across missions. This harmonization facilitates effective collaboration among various disciplines and systems, enabling integrated analysis and workflows at scale.

Data Assurance and Integrity

The data team emphasizes transparency and reliability, with evaluation practices ensuring data accuracy and relevance. Continuous oversight and validation build confidence in the integrity of the nation's data assets.

Execution Across DOE and NNSA

The Genesis Mission data team operates as a federated capability across DOE and NNSA. It aligns National Laboratories and programs under shared data standards, transforming collective data assets into a strategic resource that accelerates scientific discovery and strengthens national security.



The Genesis Mission a national initiative to build the world's most powerful scientific platform to accelerate discovery science, strengthen national security, and drive energy innovation.

For more information:

<https://energy.gov/genesis>



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