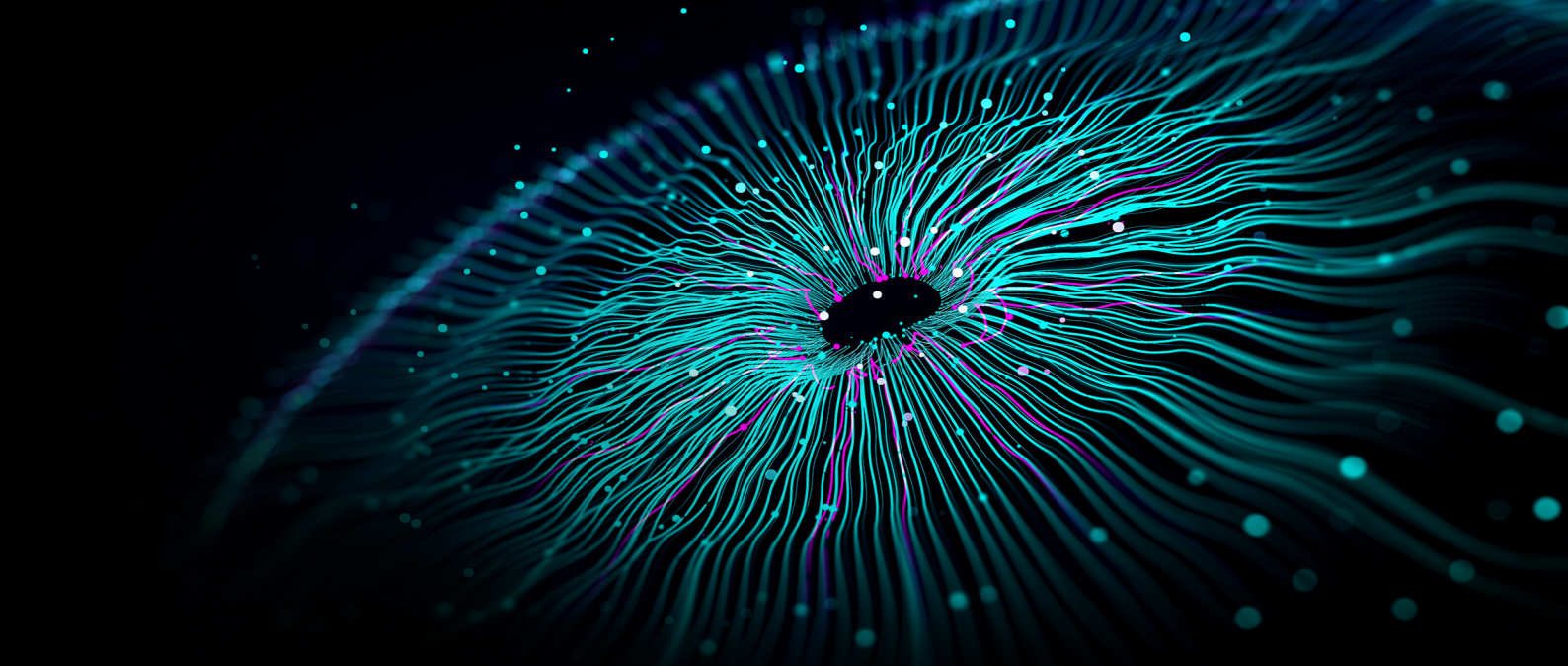


SOLUTION BRIEF

DataPorter: Automating Data Ingestion and Migration with Serverless Intelligence

Automate and standardize data ingestion and migration with AWS-native intelligence.





Enterprises manage large volumes of structured and unstructured data spread across on-premises, cloud, and hybrid environments. Migrating this data securely and efficiently into modern platforms can be a complex, time-consuming, and error-prone process. Manual extraction and transformation processes increase operational overhead, introduce inconsistencies, and delay access to business insights.

Most organizations still depend on custom-built ingestion scripts or one-off data pipelines that are difficult to maintain, monitor, or scale. As data volumes continue to grow, the need for a **standardized, governed, and serverless ingestion framework** has become critical for ensuring agility and control.

The Data Ingestion Challenge

Traditional ingestion and migration methods require extensive coding and manual effort to integrate new systems or handle incremental loads. They often lack monitoring, error recovery, and audit visibility, resulting in inefficiencies and compliance risks.

Key challenges include:

- Manual scripting for extraction, ingestion, and reconciliation.
- Limited visibility into process execution and failure recovery.
- Inefficient handling of historical and incremental (CDC) loads.
- Costly infrastructure dependencies for continuous data flow.
- Repeated engineering effort across similar ingestion projects.
- Lack of centralized governance, audit, and performance metrics.

Organizations need a metadata-driven ingestion and migration framework that automates these functions, improves reliability, and scales seamlessly across data platforms.



Introducing DataPorter

DataPorter is a **metadata-driven, serverless data ingestion and migration framework** built on AWS.

It automates data extraction, transformation, and loading from relational and on-premises systems into modern cloud data warehouses such as **Amazon Redshift** and **Snowflake** with minimal manual intervention.

Using a fully **serverless architecture**, DataPorter delivers a scalable, auditable, and cost-efficient solution for both **one-time historical migrations** and **continuous incremental (CDC) loads**.



Key Capabilities

DataPorter combines automation, scalability, and governance through a set of core capabilities that simplify data movement while ensuring consistency, visibility, and control across all workloads.



Metadata-Driven Automation

All extraction, transformation, and load logic is defined and managed through configuration metadata stored in DynamoDB. DataPorter dynamically interprets this metadata to automate pipeline execution.



Serverless Orchestration

AWS-native services such as Step Functions, Lambda, and Glue eliminate infrastructure management while providing built-in scalability and high availability.



Parallel and Configurable Loads

Supports concurrent ingestion jobs across multiple data sources with configurable extraction logic for full and incremental loads.



Built-in Audit and Monitoring

Maintains complete traceability of every data load through dedicated audit, trigger, and control tables, ensuring transparency and operational control.



Error Handling and Reconciliation

Built-in validation ensures data consistency between source and target systems, with automated notifications for anomalies or mismatched records.



Lightweight and Reusable Framework

Prebuilt AWS components, such as Glue jobs, Lambda functions, and Step Functions, can be reused across projects with minimal configuration.



Secure and Extensible

Fully integrated with AWS IAM, CloudWatch, and CloudTrail for secure operations, logging, and monitoring. Easily extended to support new sources or targets.

Business Value

DataPorter delivers measurable improvements in efficiency, scalability, and governance for enterprise data migration and ingestion. By combining reusable AWS-native components with metadata-driven orchestration, organizations can accelerate delivery, standardize execution, and maintain full control over data movement.



Key Business Benefits



Accelerated Deployment

Pre-built serverless components and templates reduce setup time by up to 80%, allowing faster delivery of ingestion and migration initiatives.



Audit and Compliance Readiness

End-to-end visibility across job runs, file transfers, and reconciliation steps ensures control and compliance.



Lower Cost of Ownership

Pay-per-use execution under a serverless model eliminates idle infrastructure costs and reduces the total cost of operations.



High Performance

Parallel extraction and ingestion deliver enterprise-scale throughput (tested at 20 GB in 20 minutes) with minimal manual oversight.



Consistent and Reliable Operations

Metadata-driven orchestration enforces standardized and repeatable processes across environments, minimizing defects and manual rework.



Scalability and Extensibility

Adaptable to new data sources, targets, and environments through configuration updates, without the need for code refactoring.



Why NuSummit?

NuSummit brings deep expertise in AI, data engineering, cloud modernization, and cybersecurity to help enterprises securely modernize and automate their data pipelines.

Our AWS-certified teams have delivered large-scale ingestion and migration programs using frameworks like DataPorter, improving efficiency, governance, and time to market.

We emphasize reusability, transparency, and measurable outcomes, working closely with clients to build robust and scalable data ecosystems.

DataPorter redefines how enterprises manage data ingestion and migration, turning complex, code-heavy operations into automated, auditable, and reusable processes.

Its metadata-driven, serverless architecture ensures consistent performance, transparent governance, and reduced operational cost.

With NuSummit's expertise in AWS and data modernization, organizations can confidently scale their data transformation initiatives while maintaining precision, control, and compliance.



About NuSummit

NuSummit is a global technology leader in AI-led digital transformation, specializing in applications, data, analytics, cloud, and cybersecurity. With over 300 clients worldwide, including 22 Fortune 500 companies, NuSummit supports organizations across industries. Our core expertise lies in banking, insurance, and capital markets, where we offer specialized solutions for these sectors.

With over two decades of experience and 3,000+ professionals, we deliver AI-driven, end-to-end solutions that integrate advanced cloud infrastructure and cybersecurity. Certified to top industry standards and backed by a robust partner ecosystem of hyperscalers and niche innovators, NuSummit is a trusted partner for secure, impactful digital innovation.

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