NuSummit

BROCHURE

Data Modernization: The NuSummit Advantage

Introduction

Responding to growing competition from digitally native fintechs and ever-increasing demands from myriad regulators requires financial institutions to reimagine their businesses with technology at its core. Data-driven decision-making underpins this transformation. But extracting and tagging data residing across applications and databases deployed over decades is easier said than done. Financial institutions need an easy, accurate, and quick way to modernize their data.

NuSummit Data Modernization solutions helps our clients extract, tag, ratify, and cloud-enable data in minimal time and with high accuracy. We combine our two decades of experience in helping banks, stock exchanges, and other such financial players leverage technology atop a no-code platform to deliver a fast, seamless and reliable solution.

Data Modernization Challenges

According to Aberdeen Strategy & Research, 'there is a shortage of partners with expertise in data modernization—a highly complex process that is further complicated by legacy systems.

This comes in the way of optimizing data infrastructure and leveraging cloud-native and hybrid technologies.'

In Short, any Data Modernization Effort Must Overcome Several Obstacles Such as:

1. Data hosted across multiple, incompatible legacy databases and applications
2. Lack of adequate expertise in handling large, complex data sets
3. Lack of expertise in the deployment and management of automation tools
4. Privacy and security

NuSummit's Data Modernization Solutions

Our solution combines our deep expertise in the financial sector with a no-code platform to get your data ready for new-age applications and the cloud. The solution has the following six components:

Discovery and assessment phase

- Assess data complexities of source systems (On Premise and Cloud) using no-code platform Data Switch
- Build code inventory with catalogue for near-to-actual estimates
- Recommend iterative approach with agile project plan and propose NuSummit's reusable frameworks to save on efforts significantly

Testing and reconciliation

- Reconciliation of the migrated data using automated tools to ensure data migration accuracy
- Row-by-row, column-by-column comparison, and validation of data by an automated tool

Data platform modernization

- Automated schema redesign to convert structures underlying legacy data models into cloud-friendly modern data structures using no-code platform DataSwitch

Data engineering pipeline modernization

- DataSwitch, a No-Code, web-based tool, converts legacy data scripts and ETL tools into modern ones. For e.g. Informatica Mappings gets converted into Python scripts with proper comments, sections and indentation

Data platform modernization

- Automated tool to create a data pipeline and their executions using DataSwitch
- Extract, transform, transfer and load data to the identified cloud platform using SQL based serverless framework SQLake

Technical documentation

- Documentation of converted code during conversion phase in CSV files
- Create & share metadata information, entity relationships, functionalities, data lineage along with graphical representation for easy understanding by Business Analysts & Development Team

NuSummit Approach for Data Modernization

Check the weather:

- Generate code inventory with catalogue using discovery and assessment tool
- Identify & prioritize the end user reports after having discussion with stakeholders especially reporting users and visualization team

Ride the waves:

- Reverse engineer priority reports to identify the database objects i.e., tables/views it fetches data from. Sort the tables in phases if list is too large
- Convert the schema/DDLs of these schema/tables/views on priority and deploy them on cloud data warehouse without touching ETL code responsible to load them
- Carry out One Time Data Migration for prioritized tables so that they are in sync with On-Premises data warehouse
- It can also be done in phases. For e.g., Executing data migration by dividing, it based on monthly/quarterly data OR using table partitions
- Point a copy of priority reports to cloud data warehouse so that it starts reaping the benefits of cloud scalability
- Carry out reconciliation of data migration to prove the results and testify the results with reporting/visualization team
- Only key matrices and KPIs of priority reports needs to be validated for reconciliation purposes
- Develop a data replication service from On-Premises data warehouse to cloud data warehouse so that data gets copied daily
- Carry out Steps a-to-f for all prioritized tables in phase wise manner
- This approach ensures all priority reports gets migrated on cloud data warehouse without going through ETL code migration to cloud. Reports start reaping benefits out of cloud data warehouse's scalability and flexibility
- If necessary, carry out catch up loads post one time data migration and before starting replication service to fill in the missing data to cloud data warehouse

Boil the ocean:

- Identify the ETL routines responsible for loading the priority tables in phase wise manner. Distribute them in phases, if necessary.
- For each phase, convert and test ETL routines into Data Engineering pipelines with below approach
- Orchestrate Data Engineering pipelines on public cloud and start executing them so that they start populating the data into respective target tables on cloud data warehouse
- However, before above step, do ensure to stop/decommission the replication service of respective tables so that it will not replicate On-Premises data onto cloud data warehouse anymore
- Gradually after converting all ETL routines into respective data engineering pipelines, entire replication service will stop
- This ensures that that all ETL code gets converted into modern tech stacks without having any impact on reporting/visualization there by improving ETL routine performance as well
- This phase takes most of the time in project as converting and testing ETL code would consume bandwidth of most associates and hence kept as last phase of data modernization journeyDocument metadata for all code that gets converted and prepare a report out of it to be presented to business users in a graphical manner to provide transparency in data engineering pipelines

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Benefits

Choosing NuSummit as your technology partner in the asset management space offers numerous advantages:

Discovery and Assessment Phase tools provide estimates that are close to actual thereby significantly mitigating the risk of project over run due to last minute surprises in scope change

Data Platform Modernization (DDL conversion) tool save conversion efforts significantly thereby making the cloud-based data warehouse ready for data migration phase

Data Platform Modernization Migration Frameworks provide ready-to-be-used code components with all best practices saving ~65% of efforts

Testing and Reconciliation capability of the tool saves testing efforts significantly and ensures the quality of migrated data required to take sign off from all stakeholders

Data Engineering Pipeline Modernization tool converts the legacy code into Python/ Spark/SQL which can be consumed by cloud-based services readily.

Technical Documentation is generally the neglected yet crucial aspect of modernization journey which is well taken care of by the tool with data lineage and graphical representations. This helps leadership to drive the data modernization programs to its highest maturity with self-service tools as future.

The NuSummit Edge

Over 200 experts in data modernization and data analytics, NuSummit is a finance vertical-focused IT solutions provider with a proven track record across digital transformation initiatives.

Over 200 experts in data modernization and data analytics

- During Assessment phase, no-code automation tool connected to all On-Premises DBs and generated a data catalogue from their data dictionary under 15 days. This helped in planning whole project with stringent timelines
- Converted > 3000 table DDLs from Greenplum into Snowflake using no-code automation tool in just 7 days
- Using NuSummit's Data Migration Framework, migrated ~0.6 Petabytes of data from On-Premises Data Warehouse to public cloud in response to a 3X rise in trading volume—within 24 days—for the leading stock exchange

Converted & tested ~2000 Informatica Mappings and ~400 Workflows into Snowflake SQLs and Apache Airflow DAGs respectively using no-code automation tool under 5 months

End-to-End data lineage created under 2 months along with customized B-tree based graphical representation at table as well as column level along with ETL Code and tagging it to PDM (Physical Data Model) as well.

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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