

Data Migration In Insurance: Moving Data Safely

How Teamvoy delivered a production-ready mobile feature for a regulated FinTech platform using an AI-supported engineering delivery model, without expanding the team or adding a dedicated mobile specialist.

Book a Consultation

INDUSTRY

Insurance

SERVICES

Data Migration, Database Engineering, IT Audit, Verification Scripting

CASE STUDY CATEGORIES

Data Engineering, IT Audit

CLIENT

Insurance Technology Company, North America

TENANT DATA PRESERVED WITH ALL RELATIONSHIPS INTACT

100% data integrity

MANUAL RECONCILIATION PROCESS AVOIDED ENTIRELY

2 weeks saved

form. Discover how our team executed a complex data migration for a North American insurtech company — consolidating multiple systems into a single platform.

01. Our Client

Our client is a mid-sized insurance technology company based in North America. They manage customer records, policy data, and analytics for hundreds of independent agents.

The company needed a reliable data migration in insurance project to consolidate information from multiple system instances into one unified platform. Each instance used separate IDs, settings, and history logs. The goal was to move all user, contact, and policy data – including activity history, tags, and attachments – without breaking relationships or losing any records.

The client engaged our team to provide insurance data migration services with a focus on accuracy, traceability, and full compliance.



02. Challenge

Performing insurance data migration across multiple systems introduced several technical and operational challenges. Each source environment used c Manage consent
IDs, enums, and reference codes. Bulk inserts often broke foreign key relationships, while triggers caused unwanted callbacks and performance delays.

Large objects such as profile images and attachments required special handling. Some tables contained missing or duplicate UUIDs, increasing the risk of data inconsistencies.

The main goals were to:

- Move all tenant data safely, preserving links and history
- Align IDs, enums, and triggers with the target system
- Achieve data migration without downtime
- Maintain full traceability for audit and rollback purposes
- Handle large datasets efficiently while retaining redo options

These challenges are common in enterprise data migration, where legacy systems must be merged without interrupting operations or losing valuable information.

03. Cooperation

Our data migration consultant for insurance worked closely with the client’s IT and compliance departments. Detailed planning and pre-migration testing were completed to reduce error potential during execution.

The project team included a database architect, two data engineers, a systems administrator, and a QA analyst.

The migration followed five structured stages: discovery, preparation, migration, repair, and verification.

- **Discovery:** Identified tenant boundaries and related records.
- **Preparation:** Created mapping tables and planned enum transformations.
- **Migration:** Loaded parent tables first, followed by dependent tables.
- **Repair:** Resolved orphaned references and data inconsistencies.
- **Verification:** Conducted record counts, foreign key checks, and file audits.

This structured cooperation reflected data migration best practices, ensuring that each step was controlled, documented, and reversible.



04. Solution

We implemented a batch-based SQL and shell-driven process specialized for **insurance data migration**. The operation started with selecting tenant data, temporarily disabling triggers to avoid callbacks during bulk inserts. Parent records such as accounts and profiles were migrated first, followed by contacts, notes, events, and history data.

Sequences were reset to prevent ID collisions, and foreign keys were reconnected using shadow columns from the old system. Legacy enums for statuses, sources, and carriers were mapped using deterministic SQL updates. Files and attachments were transferred via shell scripts based on collected IDs.

To minimize risk, all steps were executed in reversible batches — a key method in data migration best practices. Each stage included “data” and “data final” checkpoints to ensure recovery options. Orphaned records and inconsistent UUIDs were corrected or flagged for review.

Key features:

- Parent-child mapping using old_* columns
- Enum and code-set remapping
- Bulk-safe inserts with conflict handling

- File and attachment transfer via shell automation
- Reversible batch stages for redo safety

Key engineering decisions:

- Disable triggers during bulk operations for speed and stability
- Map all legacy IDs and enums deterministically to prevent drift
- Use shadow columns to reconnect foreign keys and repair orphans
- Batch load large datasets with retry-safe scripts
- Verify data integrity at every stage

This approach represented a practical example of enterprise data migration adapted for the insurance sector, following established data migration best practices.

05. Results

The insurance data migration completed successfully in under six hours during a planned maintenance window. More than 18 million records across 40 tables were moved without data loss — a benchmark achievement for data migration without downtime.

Business results:

- **100% of tenant data** preserved and relationships intact
- File transfer **success rate of 100%**
- The client **avoided a two-week manual reconciliation** process
- Unified analytics now draw from a **single clean data source**

This data migration case study demonstrates how a focused data migration consultant for insurance can deliver safe, efficient results for a live business system while keeping customer data intact and auditable. The project also established a repeatable pattern for future cloud data migration and expansion to other business units.