



CASE STUDY

SECURING LOAN DOCUMENT TESTING WITH UDA-REDACT AND UDA-GENERATE

Client Overview

A U.S. Fortune 100 housing-finance organization relies on end-to-end loan-servicing and quality-control testing to validate complex mortgage-document workflows.

Testing spans multiple document types, including Mortgage Notes, Deeds of Trust, Credit Reports, Title documents, Appraisals, and other supporting loan files. The document estate includes digitally generated documents as well as scanned and image-based pages. Test scenarios must preserve realistic layouts, data relationships, and cross-document consistency without exposing Non-Public Information (NPI).

Challenge: Realistic Testing Without Production NPI

Production loan documents provided the most realistic foundation for testing, but they contained sensitive NPI and could not be freely reused across test environments.

Generic or manually constructed templates often differed from actual production documents, reducing test realism and making it more difficult to identify layout, data, and processing defects. The challenge became more complex when NPI was embedded in scanned pages or when related values needed to remain consistent across every document in a loan file.

The organization needed a repeatable way to create realistic document variants for loan-servicing and quality-control testing while reducing its dependence on production data. All sensitive-data processing also needed to remain inside the organization's controlled environment.

The Turning Point: Adopting a Redact-Then-Generate Workflow

The organization adopted an integrated workflow combining UDA-Redact and UDA-Generate.

UDA-Redact operates inside the organization's environment, where it identifies and removes NPI from real loan documents, including information contained within scanned and image-based pages. Human review can be applied where required to validate that sensitive fields have been handled correctly.

Each de-identified document retains its original layout and structure and becomes a reusable template. UDA-Generate then populates these templates with realistic synthetic values, produces the required number of document variants, and maintains referential consistency across related documents.

The resulting synthetic documents are used in representative loan-servicing and quality-control test workflows without exposing production NPI.

Results: Secure, Realistic Test Documents

By combining UDA-Redact and UDA-Generate, the organization can:

- De-identify sensitive loan documents inside its controlled environment.
- Process NPI contained in digitally generated, scanned, and image-based documents.
- Preserve production-faithful layouts and structures as reusable templates.
- Generate realistic synthetic variants for multiple loan-document types.
- Maintain consistent borrower, property, and loan information across related documents.
- Test complete loan files without relying on sensitive production data.
- Improve test coverage by generating documents for a wider range of data and processing scenarios.
- Reuse and scale synthetic document sets across loan-servicing and quality-control test workflows.

Conclusion and Next Steps

The organization now uses UDA-Redact and UDA-Generate to transform sensitive loan documents into realistic, reusable synthetic test assets.

The redact-then-generate workflow preserves the fidelity of production documents while keeping NPI inside the organization's security boundary. This provides testing teams with greater access to representative document sets and reduces their dependence on production data.

Future priorities include:

- Expanding generation to additional document types and larger document sets.
- Increasing redaction automation to reduce manual review.
- Providing self-service document generation through user interfaces and APIs.
- Integrating the workflow with CI/CD pipelines, test-management platforms, and enterprise data systems.

