

STREAMLINE  
PAYMENTS  
TESTING  
WITH  
INFOSYS  
SWIFT  
AUTOMATION  
TOOL

Infosys®  
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The payments processing industry is transforming rapidly, driven by global shifts and the accelerated adoption of technology. This evolution has intensified challenges for technology teams that are developing and testing payment engines. The surge in demand for creating payment messages in the Society for Worldwide Interbank Financial Telecommunication (SWIFT) message types (MT) and message XML (MX) formats underscores the critical need for innovative solutions.

SWIFT processes more than 45 million financial messages over

its network daily, facilitating transactions worth US \$5 trillion. SWIFT messages form the backbone of payment instruction transmission between parties.

The need to generate payment messages in both MT and MX formats—and to convert between them—has become increasingly prevalent across diverse project scenarios. Manual creation and validation of these messages present several challenges, including compliance with intricate syntax rules, field validation, and the generation of essential mandatory and key fields.

# Challenges

Manual creation of payment files poses several challenges, including:



01

Missing manual errors in MT/MX payment files, often leading to unnecessary rework



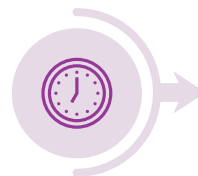
03

Using invalid file names resulting in downstream failures and reduced test coverage



02

Struggling to replicate production issues, particularly when generating bulk files with n transactions and inserting Office of Foreign Assets Control (OFAC) keywords into screenable fields for x transactions



04

Spending an average of 30 to 60 minutes on test data creation for a single payment file, highlighting the resource-intensive nature of manual processes

## The Infosys Solution

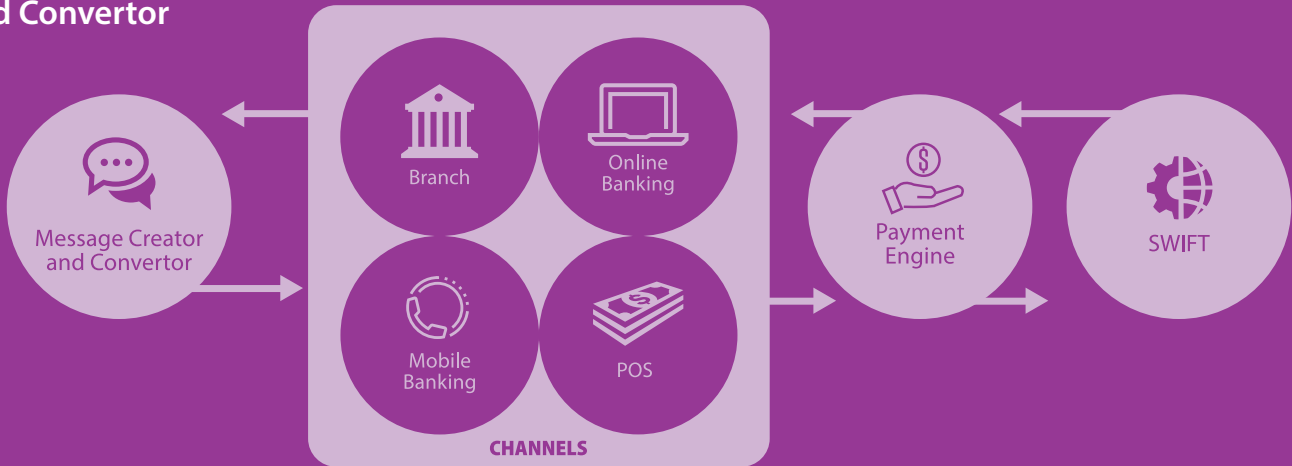
Infosys has developed an innovative and intuitive payment file generation tool with customizable options to meet diverse testing needs across the payments landscape. Infosys' SWIFT automation tool is a lightweight adapter solution that leverages robust quality engineering principles. It seamlessly integrates SWIFT standards, MT format input files, and accounting data from test databases to generate output files based on externally configurable rules. The tool offers accelerated development with shift-left capabilities and strengthened security testing with automatic OFAC keyword insertion for fraud and anti-money laundering (AML) testing. This versatile adapter can help create MT files in any client environment, produce outputs for different message categories, and simulate payment messages across varied payment ecosystems and real-world scenarios. It seamlessly integrates with automated regression test suites, supporting smoke, sanity, and regression testing while helping recreate production issues. The tool's intuitive Java-based user interface (UI) ensures smooth navigation and ease of operation.

## Key Features

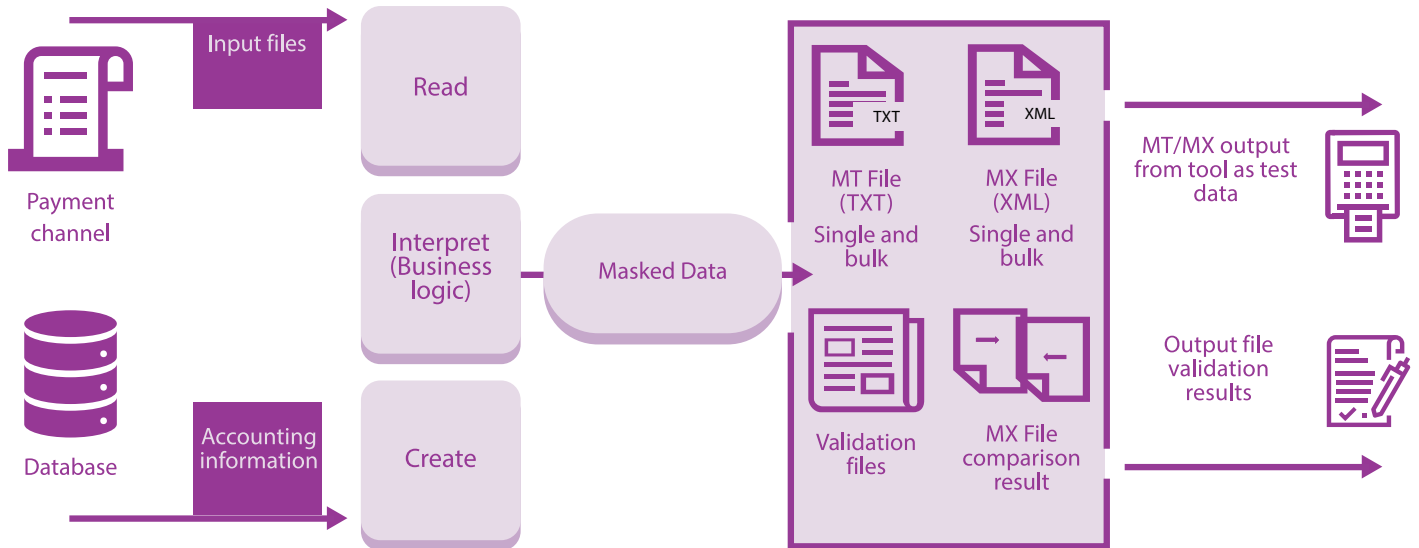
Built using Java Maven with a user-friendly UI implemented via the Swing framework, the Infosys SWIFT automation tool features an intuitive front end with tooltip suggestions for ease of use. It provides a host of innovative capabilities to streamline payment file creation. These include:

- Reducing the manual effort required for preparing payment files
- Allowing users to specify the number and type of transactions required, with files generated accordingly
- Enabling file exports with predefined nomenclature and key information, such as party details, via the user interface
- Providing functionality to compare MX messages
- Converting MT format files to MX (ISO 20022) format
- Generating messages compliant with SWIFT's ISO standards

## SWIFT Message Creator and Converter



## Infosys SWIFT automation tool architecture flow



### Benefits



**Enhanced test coverage:** Expands scope of testing by 10-20%



**Efficient test data creation:** Enables rapid generation of messages—single or up to 1000 in bulk—with various field combinations



**Time and resource savings:** Reduces test data creation and validation effort by 30% while accelerating smoke, sanity, systems integration, and regression testing by 28%



**Improved defect management:** Simplifies defect replication for root cause analysis



**Seamless adoption:** Features a lightweight design that eliminates the need for installation, enabling immediate implementation and deployment



**Flexibility and customization:** Provides externally configurable output files, allowing users to tailor the tool to specific client requirements without code modifications



**Adaptability and futureproofing:** Offers scalability to adapt to SWIFT guide updates and new payment types



**Comprehensive functionality:** Supports a wide range of operations, including outbound, inbound, recall, cancellation, acknowledgment payments, and output file comparison

## Why Choose Infosys

Infosys' commercial banking practice provides end-to-end services across various financial services segments, distinguished by our extensive product partnerships, cutting-edge platforms, a thriving fintech ecosystem, thought leadership, as well as market-ready solutions and frameworks. We have established a dedicated sub-practice focused on validation services for payment programs alongside the development of tools and accelerators that enhance efficiencies and deliver substantial benefits.

Infosys' SWIFT automation solution is a simple, flexible, and reliable tool that facilitates seamless MT to MX conversion, effectively addressing a broad spectrum of end-to-end business scenarios. The lightweight tool requires no installation, exhibiting high scalability in supporting various payment message transformations. Our rigorous quality engineering processes ensure the tool's reliability, accuracy, and performance. Through comprehensive test coverage, including functional, integration, and performance testing, we guarantee that the tool adheres to SWIFT standards and is compatible with various other payment systems.

## Success Story

A leading US-based financial institution implemented the Infosys SWIFT automation solution for one of their Single Euro Payments Area (SEPA) payment projects.

Before implementation, the testing team faced the challenge of manually creating a high volume of payment message files during each testing cycle, putting considerable strain on delivery timelines.

Data errors within these files led to failures in downstream systems, necessitating extensive rework and adversely impacting test coverage.

Implementation of our solution significantly reduced manual effort, improved test coverage by 10-20%, and accelerated time-to-market by 38%.

It enabled the creation of up to 1000 bulk messages and reduced test data generation and execution time by 30%.

Furthermore, the solution proved instrumental in replicating production issues within the payment engine caused by irregular data, thereby streamlining root cause analysis and accelerating issue resolution.

For more information, contact [askus@infosys.com](mailto:askus@infosys.com)

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