



Risk-Free, Agile Mainframe Modernization to AWS Cloud

Modernization Challenges

Modernizing mainframe systems remains one of the most complex and high-risk initiatives facing enterprises. Traditional migration approaches require deep mainframe skills, rely on fragile middleware layers (MQ, CTG, ESB), and often require “big-bang” rewrites that disrupt mission-critical operations.

Organizations struggle with:

- Tight coupling across core systems, making phased migration risky
- Limited mainframe expertise and long manual development cycles
- Expensive middleware dependencies creating technical debt
- Inability to modernize without disrupting production systems
- The need to leverage cloud-native scalability and AI while core workloads remain on-prem

As a result, enterprises delay modernization—despite cloud being strategically mandated.

The OpenLegacy Solution

OpenLegacy and AWS partner to deliver risk-free, phased mainframe modernization, allowing enterprises to migrate workloads and expose core functions without disruption. OpenLegacy automatically generates bi-directional, modernization-ready APIs that connect mainframe programs to AWS cloud-native services—while systems stay fully operational.

This solution supports:

- Migration → Move mainframe modules to AWS and maintain connectivity
- Augmentation → Build new digital services on AWS using mainframe logic
- Decoupling patterns enabling safe, progressive modernization
- Structured execution via automated API generation & testing

OpenLegacy is part of MAP ISV Tooling to accelerate modernization initiatives as well as integrated with AWS Transform for Mainframe (ATX), to support coexistence and integration during migration execution.

Benefits

Mainframe to Cloud — At Your Pace, Without the Risk

»» Zero-disruption modernization

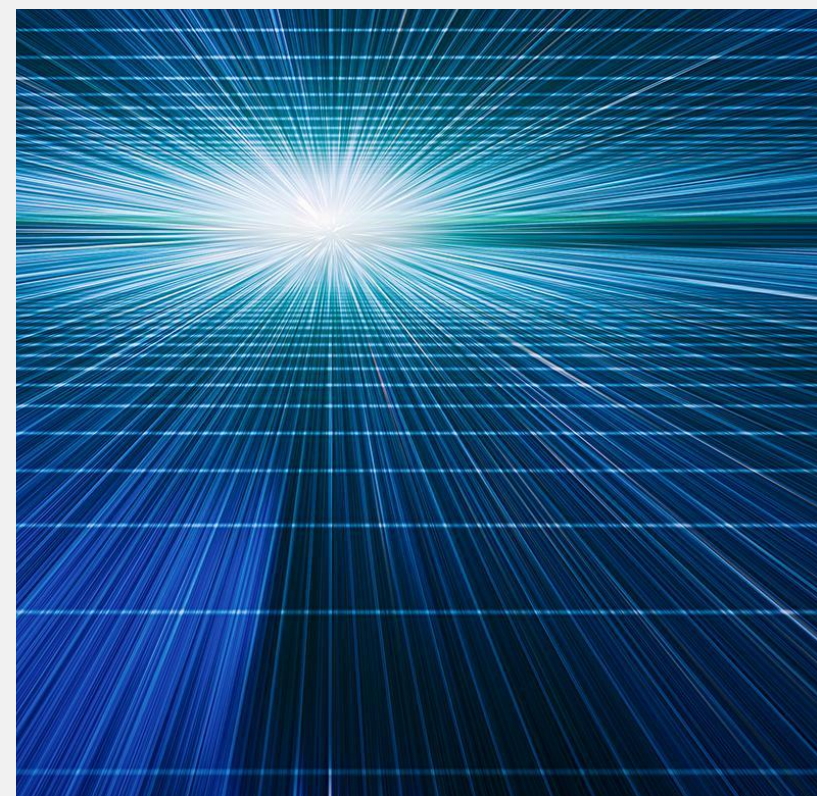
Mainframe and cloud run in parallel during each phase

»» Accelerated Time To Value

- Automated end points generation reducing development from months to days

»» Eliminate middleware cost and complexity

Direct mainframe access bypasses MQ, CTG, ESB layers



OpenLegacy on AWS

- Available via **AWS Marketplace**
- **Part of the AWS ISV Tooling Program** – enabling funded software licenses for qualified modernization engagements
- **MPPPOP and ISV Accelerate**
- **Mainframe Modernization Competency**

Case Study:



»» Challenges

Legal & General had goal to migrate “softcore” applications to cloud environments while keeping mission-critical COBOL systems “hardcore” on the mainframe. Their existing architecture relied on CTG and MQ, creating bottlenecks, high operational cost, and limited scalability for customer-facing processes like claims. They needed a modernization path that enabled hybrid cloud adoption without disrupting core mainframe operations or requiring extensive manual integration work.

»» Solution

OpenLegacy automated the exposure of core COBOL logic as APIs, enabling direct mainframe connectivity without CTG. Softcore applications were migrated to a blended AWS + OpenShift environment while core systems remained on mainframe, operating in parallel. OpenLegacy’s generated APIs allowed both sides to communicate natively, supporting scalable, cloud-driven workloads while maintaining mainframe stability.

»» Results

The organization now executes modernization initiatives faster, with lower risk, preserving mission-critical mainframe workloads.

- Cloud handles digital scale while mainframe remains a stable core
- Hybrid, multi-cloud model with AWS (EC2, EKS, Lambda, DynamoDB) + OpenShift
- 8–10× faster migration from COBOL to REST
- 6–8× faster migration from MQ to REST .



Features

Key Technical Capabilities

- Direct native access to legacy systems without middleware
- Automated microservices/API generation for AWS
- Structured decoupling patterns to support phased migration
- Built-in automated testing for pre/post-modernization validation

AWS Architecture Options

- Works with AWS Lambda, API Gateway, EKS, EC2, and OpenShift
- Supports hybrid and multi-cloud deployment (on-prem, SaaS, private cloud)

Visit [AWS Marketplace](#) or [OpenLegacy Website](#) to purchase or start a Free Trial today.



Get started with OpenLegacy solutions on AWS