

SIMULATOR



neaPay ISO8583 simulator Features & Showcase

THE COST OF COMPLEXITY

- + Testing payment systems is slow, expensive, and requires managing multiple, incompatible simulators.
- You need speed, reliability, and full coverage.

UNIFY & ACCELERATE: THE HIGH-PERFORMANCE PAYMENT TEST ENGINE

Single simulator for Acquirer, Issuer, Switch, and Clearing roles.





****Messaging:**** Full support for ****ISO 8583****, ****ISO 20022**** (MX), and SWIFT (MT/MX).

****Device:**** ATM, POS, E-commerce, and Mobile Device simulation.

****Security:**** EMV capabilities including Cryptogram (ARQC) and PIN validation.

UNIFIED PROTOCOL COVERAGE

****Global Schemes:**** Visa, MasterCard, Amex, Diners, JCB, CUP, UPI national and custom schemes.

****Host Systems:**** Integration with Base24, Way4, Alaric, Postilion, SmartVista, and custom hosts.

****Roles:**** Acquirer, Issuer, Switch, and Clearing (IPM/CTF).



23	002	Cash Magnetic Stripe & Signature							
24	002	001	1	Cash withdrawal	002.001.1	YES	NO	**NOVALUE**	\$000
25	002	002	1	Cash withdrawal Advice request	002.002.1	YES	NO	**NOVALUE**	\$900
26	002	003	1	Cash withdrawal	002.003.1	YES	NO	**NOVALUE**	\$000
27	002	004	1	Cash withdrawal Reversal advice request	002.004.1	YES	NO	**NOVALUE**	\$400
28	003	Manual Signature							
29	003	001	1	Cash Manual Sig Authorization	003.001.1	YES	NO	**NOVALUE**	\$000
30	003	002	1	CashManual Sig Advice request	003.002.1	YES	NO	**NOVALUE**	\$900
31	003	003	1	Cash Manual Sig Authorization	003.003.1	YES	NO	**NOVALUE**	\$000
32	003	004	1	Cash Manual Sig Reversal Authorization	003.004.1	YES	NO	**NOVALUE**	\$400
33	004	POS transactions							
34	004	001	1	POS Authorization request	004.001.1	YES	NO	**NOVALUE**	\$000
35	004	002	1	POS Authorization request repeat	004.002.1	YES	NO	**NOVALUE**	\$000
36	004	003	1	POS Authorization Advice request	004.003.1	YES	NO	**NOVALUE**	\$000
37	004	004	1	POS Authorization Advice request repeat	004.004.1	YES	NO	**NOVALUE**	\$000
38	004	005	1	POS Financial request	004.005.1	YES	NO	**NOVALUE**	\$000
39	004	006	1	POS Financial request repeat	004.006.1	YES	NO	**NOVALUE**	\$000
40	004	007	1	POS Financial advice request	004.007.1	YES	NO	**NOVALUE**	\$900

EFFECTIVE TEST CASE BUILDING

PERFORMANCE LOAD TESTING +1000 TPS

High speed

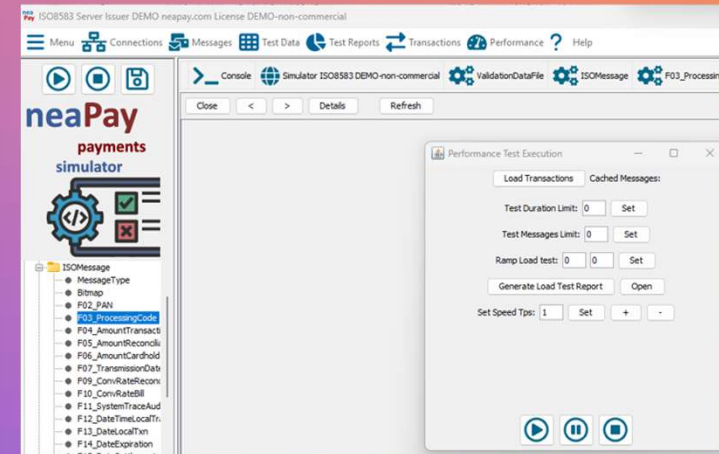
Peak detection

Failure recovery detection

Duration test

Average response

For failure recovery detection, we proactively stress-test the high-speed payment system by deliberately introducing operational failures – like incorrect data or system interruptions – to ensure it remains secure, reliable, and continues to process transactions effectively, even when confronted with unexpected errors. This critical, high-stakes testing prevents costly outages and protects our revenue, reputation, and customer trust by identifying and fixing vulnerabilities before they impact the real-world transaction environment



```

06-10-25 12:01:12:820:MatchStore Engine disabled and cleared ...
06-10-25 12:01:12:823:Client TCP/IP socket created on address localhost/127.0.0.1:9009[23154]
06-10-25 12:01:12:824:Started thread:38/Thread-9
06-10-25 12:01:12:825:38 Client listener running on port:9009 Thread-9
06-10-25 12:01:12:828:Client connected:true keepAlive, checking again in 60 seconds 37
06-10-25 12:01:12:830: Loading file:scripts/script_loadTest.js
06-10-25 12:01:12:861: Loading file:scripts/script_loadTestReport.js
06-10-25 12:01:19:182: Transaction Selected:ISO8583-93 - 02 - Authorization
06-10-25 12:01:19:189:Run mode selected : RunOne for : ISO8583-93 - 02 - Authorization
06-10-25 12:01:19:219:ACQ: Test case :ISO8583-93 - 02 - Authorization
06-10-25 12:01:19:226:ACQ: Card record Found:DummyCard1:
06-10-25 12:01:19:231:Key found:1:Key1
06-10-25 12:01:19:233:ACQ: Building message
06-10-25 12:01:19:236:Started building message ...
06-10-25 12:01:19:299:Card set: DummyCard1
06-10-25 12:01:19:300:Key set: 1
06-10-25 12:01:19:300:Net: Message sent by Simulator Acquirer
06-10-25 12:01:19:320:
- - - - -
Sim: MessageType: 0100
Sim: Bitmap: 723C46D128E0B000 [2,3,4,7,11,12,13,14,18,22,23,25,26,28,32,35,37,41,42,43,49,51,52]
Sim: F02_PAN: 987650000306084
Sim: F03_ProcessingCode: 010000
Sim: F04_AmountTransaction: 000000005000
Sim: F07_TransmissionDateTme: 1006120119
Sim: F11_SystemTraceAuditNumber: 000201

```

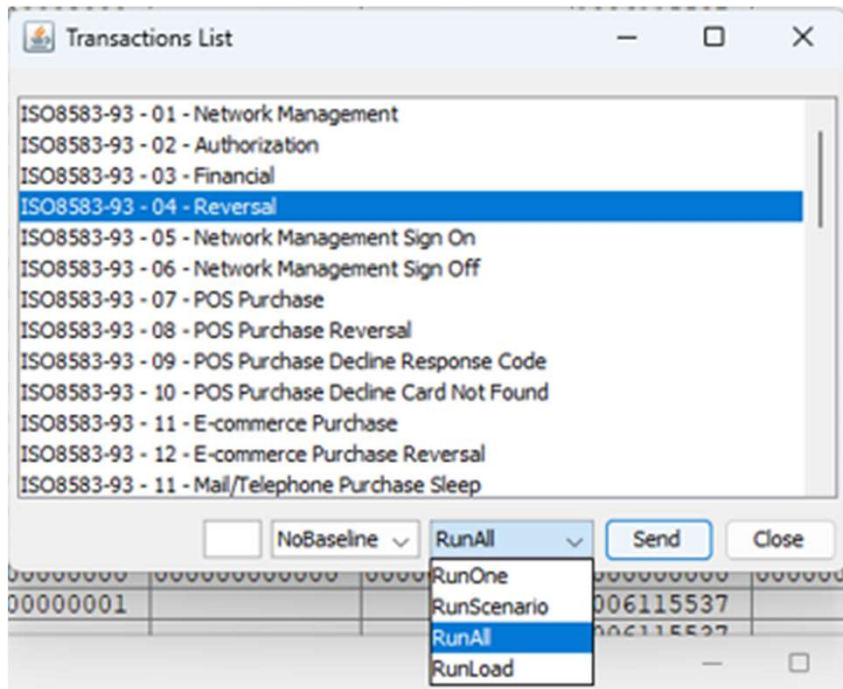
Integrate testing as a continuous process, not a manual gate.

neaPay is designed for rapid deployment and automatic execution, making it a critical component of your DevOps pipeline.

- ****Regression:**** Run scenarios, batches, or full regression suites with a single command or click.
- ****Zero-Error Deployment:**** Store configurations (JSON), messages, and test data (Excel) in Git for perfect version control.
- ****Analytics:**** Automatic generation of reports, data exports, and pass/fail analytics.

TOTAL AUTOMATION & CI/CD

ALL RUN MODES



Functional testing

Optimized for User Operation, data import and manipulation scripting, test case building, regression Pack creation, usually on a Windows workstation

Scenario testing

Designed for User and Automatic run modes, it ensures a flow of transactions is completed correctly

Regression Testing

Optimized for Automatic Execution, on a Virtual Machine, a CI/CD pipeline, or in a Docker container, ensures the system behaves identically to expectations and previous runs.

Load Testing

Designed for high speed, long duration and target system point of failure detection and recovery, it is an industry leader, testing and detecting issues with the largest payment platforms in the world.

ARCHITECTURE: THE SCRIPTABLE PAYMENTS PLATFORM

The neaPay Core is a lightweight, Java-based controller powered by a versatile JavaScript scripting engine, offering unmatched transparency and customization.

Modify ****Authorization Logic**** (PIN/ARQC checks, response codes).

Customize ****Message Building & Parsing Logic****.

Adjust ****Test Data Handling**** and external integrations.

Change ****User Interface Interaction**** for test case display.

Passes any compliance audit – complete business code exposed

VS Code editor showing the script_issuer.js file. The editor has a title bar with 'Console', 'Simulator ISO8583 DEMO-non-commercial', and 'scripts/script_issuer.js'. Below the title bar are buttons for 'Save', 'Cancel', '+', and '-'. The code in the editor is as follows:

```

41     printLine(" get HELP at neapay.com/start");
42     //business behaviour goes here
43 }
44
45 function processRequest(issMessageIssRq) {
46     issMessageIssRq = JSON.parse(issMessageIssRq);
47
48     issBusy = true;
49
50     if (displayInfo == true)
51         displayIssuerRequest(issMessageIssRq)
52
53     var issuerDataFound = findIssuerData(issMessageIssRq);
54     var cardFound = findCard(issMessageIssRq.F02_PAN.value,
55         issMessageIssRq.F35_Track2Data.value);

```

Bet ready to receive

POC in days

MVP in week

FULL Regression in a month

FAST TO MARKET NEAPAY SIMULATOR



- ❑ **Processing centers:** simulate all protocols and unify test tools
- ❑ **Fintech:** experience ISO8583 testing in the most assisted way possible, abstracting most of the protocol technicalities
- ❑ **Consulting companies:** offer your services with our tool, supply the complete solution to your customer and rise up to expectations

Pre-certification testing with all major schemes, stress testing new system enhancements, and simplifying maintenance.

- Abstract complexity
- Simplify and automate testing
- Ensure 100% system functionality
- Go LIVE with confidence

KEY USE CASES NEAPAY ISO8583 SIMULATOR

DEPLOYMENT & ENVIRONMENT

Run the simulator wherever your business needs it—from a local workstation for quick POCs to a fully containerized cloud environment for high-load production testing.

OS Agnostic	Windows	Linux	Mac
Cloud Native:	Azure	AWS	Docker
Scaling & flexibility	Load scaling instances	Balancing Instances	Negative Instances

PERSONALIZED OFFER

Project High level estimate

Project High level Architecture

Project Pricing proposal

Project Timeline

Project Support

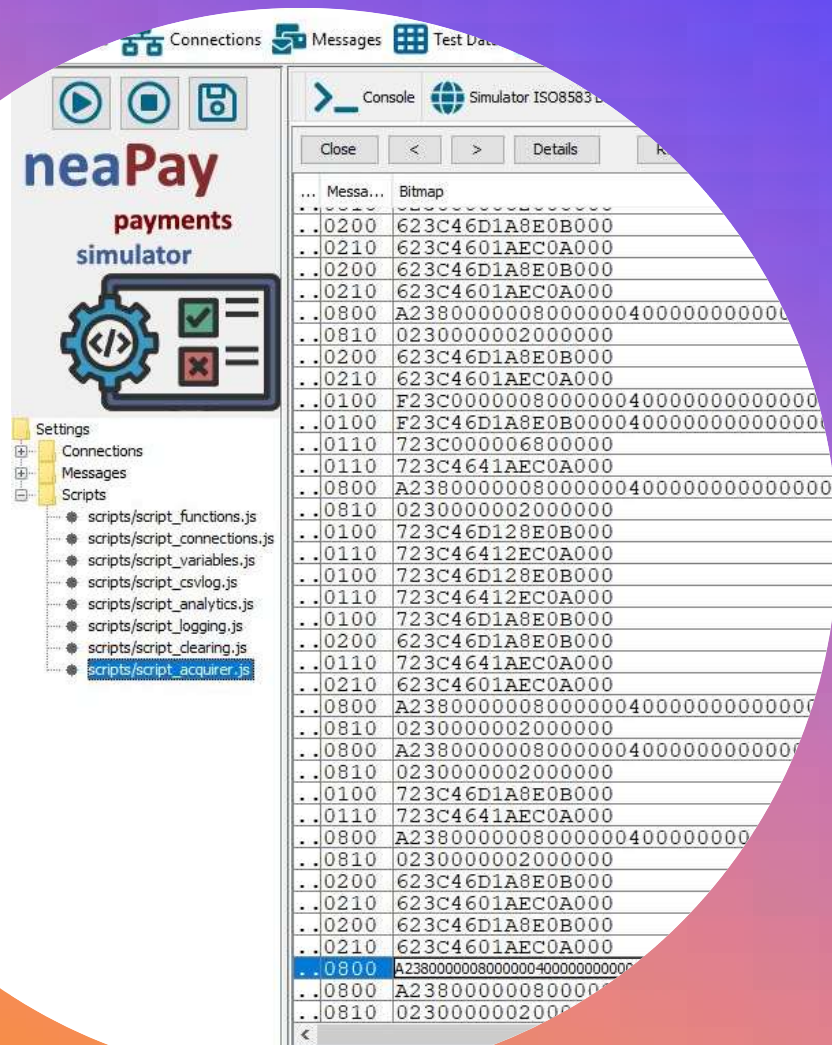
Business As usual

**For a personalized offer please request the Business
brochure for your Business/company**



PRICING PROPOSAL

Product	SLA	Support	Price
ISO8583 simulator	1 day		\$



THANK YOU

neaPay.com